DOCUMENT RESUME

ED 377 171 SP 035 604

AUTHOR	Tanner, Michael, Ed.
TITLE	Classroom Research by Classroom Teachers, 1992.
INSTITUTION	Northern Arizona Univ., Flagstaff. Center for Excellence in Education.
PUB DATE	92
NOTE	168p.; For Volume 1, see SP 035 603.
AVAILABLE FROM	Northern Arizona University Reprographics, Box 5774, Flagstaff, AZ 86011 ($13).
PUB TYPE	Reports - Research/Technical (143) -- Collected Works - Serials (022)
JOURNAL CIT	Classroom Research by Classroom Teachers; v2 1992
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	*Action Research; Classroom Research; *Classroom Techniques; Educational Research; *Educational Researchers; Elementary Secondary Education; Experiments; Professional Development; Research Projects; Teacher Participation; *Teacher Role; Teachers; *Teaching Methods

ABSTRACT

This volume celebrates teachers as life-long learners of the art of teaching, by presenting 21 action research studies designed and implemented by classroom teachers. A "How To Get Started" section outlines action research steps and offers worksheets. Descriptions of the research studies begin with ethnographic studies, which include "Adopt a Whale" (Connie Miles); "Teaching SQR to High School Students" (Shelley Bunch); "Using Computers with High and Low Readers" (Lori Dahl); "Mnemonics in the Biology Classroom" (Steven Gianelli); and "Breaking the Cycle of Frustration" (Lynn Reesman). Descriptive studies focus on reading aloud to increase interest in reading, effects of a buddy reading/writing strategy, effects of 'Matn Their Way,' reading aloud and story mapping to improve students' writing, difference between student reading strategies in basals and tradebooks, relationship between spelling mastery and reading achievement, improving classroom atmosphere, sentence combining instruction, effect of prewriting on writing, effect of a three level guide on sixth graders' comprehension of text, free writing versus teacher-directed writing, and impact of highlighting on comprehension. Experimental studies included: "What Effect Will Inventive Spelling Have on Kindergarten Children's Learning To Read?" (Mary Coyne); "Can Student Retention of Vocabulary Be Influenced by Pre-Reading Activities?" (Jane Peacock); "The Interactive Inquiry Approach to Teaching Vocabulary" (Leanne Fernald); and "Will Teaching Activities for Language Knowledge (TALK) Improve Students' Language Skills?" (Sherri Hochstettler). (JDD)

classroom research

by classroom teachers

volume two

dr. michael tanner, editor

center for excellence in education

arizona reading association

INTRODUCTION

This volume of *Classroom Research By Classroom Teachers* continues the celebration of teachers as life-long learners of the art of teaching. On a daily basis teaching requires hundreds of decisions and actions. Only when teachers create a structure for inquiring and pause to reflect do they identify their impact, uncover solutions to problems, create alternative ideas, and reach conclusions about the effectiveness of their actions. The studies contained here reflect the mental activities involved in teaching: observing, questioning, answering, intuiting, synthesizing, and learning. I think you will notice the "reward" of such purposeful mental activity. There is a sense of satisfaction indicated in each study that acts as a renewing force and compensates for the expended energy. In these studies teachers plan and deliver instruction they are curious about. They spend time thinking about the consequences of their actions and implications of their outcomes both for their students as well as their own professional behavior. Often teachers use their evidence to join debates in their buildings, or districts, over appropriate methods and materials to use effectively with learners. Reports indicate they enjoy increasing their personal power and influence over their environment.

This volume also acts as evidence to counter the prevailing negative attitude towards teachers. The educators represented here take their classroom efforts seriously enough to study them. The reflection on teaching indicated in these designs and activities indicate a palpable rigor and vitality of thought that should be recognized and rewarded. All of these researchers have included their professional addresses in the hopes you will contact them about processes and/or materials they used. They all encourage you to design and study topics of interest to you and they offer their support. Networking between researchers creates an excitement and an intensity to teaching that becomes a reward in itself. Validity of results also increases as we collectively study problems over grade levels, diverse populations, and environments.

The "How to Get Started" section of this volume provides a handbook of steps for designing your own action research designs. I explain three categories of design activities and offer worksheets for you to use while planning. You may implement a study just about any time during the school year. Action research doesn't require any drastic changes in your teaching. It only requires careful thought before, during, and after what you would have done anyway. Join us as reflective practitioners and see for yourself.

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HOW TO GET STARTED

Why should you design and conduct your own personal study in the privacy of your own classroom? Because teaching is an interactive, multidirectional process with hundreds of instructional decisions being made instantaneously throughout the day. Teachers are in constant danger of becoming caught up in the mental frenzy of instruction and being dictated to by conditions. Instead of being purposeful practitioners they are dominated by immediate events and merely reactors to learners and group dynamics. When this happens, teachers finish a lesson and then a day exhausted, but without much satisfaction from their efforts. They rode a tiger , but at such a level of intensity they certainly didn't control its direction or learn anything useful for the next ride.. Thinking and acting as a teacher/researcher allows you to focus your instructional intentions and take charge of your day. You will question, answer, then question your answers until you see patterns emerging. The explanations you formulate for these results identify behavior you want to maintain or eliminate. The positive techniques or materials discovered become part of your teaching rationale and begin to guide your decisions while you are in the thick of things teaching a lesson.

Classroom research helps you approach your classroom as a professional growth laboratory. The usual processes of planning, teaching, reflecting, and evaluating are made rigorous by the addition of observation and gathering of evidence. The quality of design, insight gained, and usefulness of outcomes is totally up to you. Documentation adds credence to your feelings about your teaching and substantiates conclusions and opinions about what works, and doesn't work, for you in your situation. Exploring learning dynamics in a research design provides immediate feedback and brings you as the teacher/researcher as close to the effective teaching evaluation process as you can ever be. A list of immediate benefits are:

1. Documentation of student progress and the effect of your teaching efforts.

2. Articulation of steps you are following to achieve an objective.

3. Fine tuning and personalizing the teacher evaluation process. Action research puts you in charge of your own observation and evaluation. Professional growth is personalized and relevant.

4. Building of consistent patterns of success for yourself.

5. Articulation of why you teach the way you do.

6. Grounding your teaching methods on a proven research base instead of feelings or a status quo.

7. Celebration! You have added a component to your teaching which produces its own rewards: insight, wonder, curiosity, exploration, proof, and reasoning.

Are you ready to begin? I am going to present eight simple steps to follow while thinking through your design. There are three categories of designs to place these steps in with only slight modification. Choose the category that best suits your question and your intent.

Step One

Review the sample articles, designs, and questions in this volume for ideas. Reflect on your own teaching and job description. What questions come to mind about the teaching-learning process in your classes?

Step Two

Review the three categories of research design presented below and select one to use while answering your questions.

Step Three

Use the planning guide sheets to refine your pursuit of answers to your question. Talking with a colleague is helpful now. Use the peer editing guide sheet (presented in the Conclusions section) to stimulate questions about your initial design. The purpose is to note any omissions in data gathering and procedures before you begin so as not to be sorry during the study. Ask yourself: Am I collecting data and evidence that will provide an answer?

Step Four

Implement your study or enter the research situation.

Step Five

Collect and categorize your data. Code it and maintain comments about it. Periodically spend time thinking about what is happening. Maintain a dated research journal or diary.

Step Six

End your study. Sift through your results and summarize them. Use visual summaries as well as words whenever possible. Return to your question and answer it. Look for additional results and implications. Present interesting and/or humorous examples of student work.

Step Seven

Discuss your results with an interested colleague. Use one of the example articles as a guide to write a draft of a document reporting your findings. Use the peer editing sheet as a guide to refine your narrative. Select a publication source and edit your first draft to suit their publication style. Send your article off. Broadcast your results locally to your administrator(s) and colleagues. Use the results to influence your working environment.

Step Eight

Bask in satisfaction!

I am putting all three categories of design side by side to profile the slight differences between models.

Experimental	Descriptive	Ethnographic
Problem	Problem	Problem
Review of Literature	Review of Literature	Review of Literature
Hypothesis	Question	Entry into Field Site
Pre-Test	Population/Sample	Data Collection Strategies
Treatment	Instrumentation	Hypotheses Formulation
Post-Test	Data Analysis	Data Analysis
Data Analysis	Conclusion	Interpretation
Conclusion		

You decide which design activities and sequence suit your study by refining your question and intent, then matching your plan to the realities of your classroom and schedule over the period of time you will research. For example, you may be curious about your impact on students. Spend some time narrowing this curiosity down to a specific question such as: Does my teaching style have an effect on my students? Now you're ready to select a design category that identifies your effect by projecting what you would have to do to research answers to your question. The organizer below indicates possible avenues of thought to follow as a model of how to select a design.

What Effect Does My Teaching Style Have on My Students?

Experimental	Descriptive	Ethnographic
1. Identify what you mean by "effects" and "style."	1. Identify what you mean by "effects" and "style."	1. Decide on a population.
2. Select or create a pre-test for effects you think you have.	2. Create a survey (or surveys) with items that isolate effects.	2. Create a format for writing your field notes.
3. Select a method or behavior to study which you use while teaching students.	3. Select a population.	3. Begin teaching and observing.
4. Create two groups of students nearly equal in abilities.	4. Administer surveys, interview students.	4. Refine your question. Identify what you mean by "effects" and "style."
5. Create two sequences of activities - one with the method and one without.	5. Think of ways to get into students' minds and help them articulate effects.	5. Write notes to yourself after each observation, interview learners, survey other teachers and administrators, ask colleagues to observe you, maintain a diary or journal of observations.
6. Teach.	6. Analyze data for effects.	6. Periodically review your notes and look for trends, categories, interesting quotes from students. Describe your findings about your effects with metaphors, similes, examples, etc.
7. Post-test.		7. Organize your study in some manner (categorically, by effect, chronologically, case by case, etc.) and write a report.
8. Analyze for effects.		

ETHNOGRAPHIC DESIGN

Research methods from the social sciences suit educational realities much more appropriately than design based on a scientific control of variables. An ethnographer "lives with the natives" for years and notes everything. Teachers also live with their learners. As the year begins, the teacher/researcher notes patterns in the interactions occurring. Questions arise about why and when certain things happen and the researcher focuses on information that will interpret what is happening. Besides diaries, student work, surveys, grades, and scores the researcher analyzes field notes taken as events are taking place, interviews learners, and often photographs the learning activities as an aid to analysis of the dynamics involved. Collecting, analyzing, and displaying products of events is helpful too.

Guide for Ethnographic Design

Purpose: to explore what is happening in a learning situation by "living with the natives" and documenting as many factors as possible

	A MODEL	YOUR DESIGN
1.	Describe the learning situation you want to examine:	
2.	Describe and create your procedures for studying the situation:	
3.	Enter the environment or create the situation and begin to note the dynamics and "actors":	
4.	Develop questions about what is happening:	
5.	Continue gathering data. Analyze with a focus towards your questions:	
6.	Identify patterns and develop more questions:	
7.	Reflect upon the dynamics you noted and identify insights and patterns:	

A suggested field notes format:

(Location of Observation)	(Index Word) Date: Time:
DESCRIPTION OF EVENTS/PERSONS	RESEARCHER INSIGHTS/COMMENTS
1. *Sequence of Events:* *(Researcher writes descriptions of:* 2. *-- events and emotional state of participants* 3. *-- quotes* 4. *-- physical behavior, positions* *-- key words)* 5.	*(Researcher writes down:* *-- intuitive reactions* *-- background/control information* *-- categories of events and key words so you can organize notes over long periods of time* *-- evaluations* *-- conclusions)*

Judith Goetz and Margaret LeCompte (1984) provide a thorough explanation and clear examples of ethnographic process for collecting information in Chapter 5 of their text *Ethnography and Qualitative Design in Educational Research*. A brief listing of their steps offers an introductory guide:

1. Force yourself to make decisions that narrow the study.
2. Force yourself to make decisions concerning the type of study you want to accomplish.
3. Develop analytic questions.
4. Plan data collecting sessions in light of what you find in previous observation.
5. Write many "observer's comments" about ideas you generate.
6. Write memos to yourself about what you are learning.
7. Try out ideas or insights on key subjects.
8. Begin exploring related literature while you are "in the field" (researching).
9. Play with metaphors, analogies, and concepts in preparation for writing your narrative describing what you found.

The finished report is a narrative of what occurred during a lesson, unit, semester, or school year. Analyzing and concluding about why and how learning happened is included. The strengths of researching this way are: methods closely fit what teachers do during instruction; rigor is added by taking copious notes during constant observation of events; reflection occurs while systematically searching and analyzing transcripts of interviews, observational notes, student work, and other materials the teacher accumulates; teachers teach and students produce

as they normally would. A key difference between ethnographic design and the other two is the influence of context. This type of research allows for the fluidity and spontaneity of events a teacher faces. Key words are: observing, questioning, noting.

DESCRIPTIVE DESIGN

Researchers using this design study learners by focusing on data collected - usually through, but not limited to, teacher-made surveys. You may also use student work, researcher diaries, observation checklists, test scores, grades, etc. You may study data such as test scores over years and identify patterns and/or trends. The insights come from the researcher's ability to identify factors and their relationships.

Guide for Descriptive Design

Purpose: to describe a learning situation (or learner) and the interplay of variables for the purpose of studying them

	A MODEL	YOUR DESIGN
1.	State your question: *What attitudes towards reading a textbook do my students have?* *How do students learn new words?*	
2.	Describe the population you will survey/ describe.	
3.	Create the survey or activity students will complete to provide you with the descriptive information. or Describe the data you will collect about a situation or learner.	
4.	Describe what you did in step-by-step sequence.	
5.	Discuss your conclusions and insights related to what is happening in the learning situation or learners(s) you selected for study.	

The finished report usually presents charts and graphics of data collected and the narrative explains pertinent observations and findings. Benefits of this research are the use of data over long periods of time such as: district test scores for several years; grades and/or test scores collected for large groups of students; checklist and survey results collected by the teacher in an attempt to profile a category of students or have them self-report a cognitive process

teacher in an attempt to profile a category of students or have them self-report a cognitive process used during learning. Key words are: survey, collect, analyze, profile.

EXPERIMENTAL DESIGN

Comparison is the focus of studies in this group. Compare two or more groups, or two or more methods. Control for as many causative factors as possible in your research setting. Assess pre- and post-ability in some way (this does not have to be a test). Quantify and discuss changes. Validity of causative factors is increased by length of study and number of presentations of material/method. A rule-of-thumb should be that a study runs for at least 12 weeks and new method used by students 3 times between pre- and post-assessments.

Guide for Experimental Design

Purpose: to examine the effect of a new method or several methods by comparing and contrasting

A MODEL	YOUR DESIGN
1. Statement of the question researched:	1. Decide on a particular content field reading problem you have been thinking about for a while. State it in the form of a question. *Can I teach a note-taking method to sophomores in U.S. History that will help them organize and retain information more effectively than they do now?*
2. Sample population:	2. Select a sample -- your students, yours and one other class, etc. *My first and second hour U.S. History class seem to have the same type of students in them. Or, my first hour and Steve's second hour U.S. History class seem to be equally matched. I can check factors such as number of each sex, total number of students, and grade distribution on the last test.*
3. Describe steps of instruction for each group. Attach actual worksheets students will use and materials the teacher will use:	3. Steps I actually will follow are: *Treatment:* / *Control:* *1.* / *1.* *2.* / *2.* *3.* / *3.* *4.* / *4.* *5.* / *5.*
4. Describe the type of information you will gather and examine to note changes in students:	4. Think of several ways you could answer your question. Decide on one to try out. Write down the general steps you will follow.

4. Describe the type of information you will gather and examine to note changes in students:	4. Think of several ways you could answer your question. Decide on one to try out. Write down the general steps you will follow. *a. I could devise worksheets using the mapping method of note-taking for Unit 3. In one class, I could cover the same information as in the other class, but use the mapping worksheets every time there was a presentation of material. After the unit, I could compare the notes of both classes and test results.* Now think through the specific steps you will follow. *a. I will discuss the reason people take notes -- so they can remember something later and so they can remember which things come first, etc.* *b. For the first presentation in this unit, I will have students take notes as they always do. After class, they will hand their notes in. I will evaluate both classes according to amount and organization of information and decide which students have superior, average, and below average notes.* *c. I will continue teaching the unit the same way to both classes, but whenever there is a lecture, I'll teach the mapping method to the second class hour.* *d. After the last lecture, I will again evaluate both classes and classify the notes into the same three categories. I will solicit comments about notetaking from both classes.* *e. I will then examine the data in terms of these questions:* *How many students from each class were in each category before and after the unit?* *Why did the data come out as it did?* *What conclusions can I draw about the effect of mapping instruction?*
5. Conclusions/benefits:	5. After you have thought of ways to answer the questions and have used your selected procedure, organize any data collected including students' comments and your observations. Draw some conclusions based on your experiment. List some additional factors you would add or change next time. List any other related ideas you would now like to try.

Example for presenting the data used in Step 4:

	1st hr (pre-)	1st hr (post-)	2nd hr (pre-)	2nd hr (post-)
# superior	2/31	3/31	2/31	8/31
# average	14/31	13/31	13/31	18/31
# < average	15/31	15/31	14/31	5/31
	Control Group (No change)		Experi. Group (Effect with low end)	

Analysis of the numbers reveals students in the low experimental group have moved up.

6. Collect and report enlightening comments from students in both the control group:

"I would rather just listen than take notes."

"I have difficulty picking out important ideas. I try to write down everything you say."

"I go over my notes before a test."

and from students in the experimental group:

"I like the mapping idea -- I can see how ideas relate."

"I never knew your lectures were organized before."

"It was hard to do at first, but after the third time, I saw what I was supposed to do."

SUMMARY

I hope you see from my directions that action research is nothing more than careful teaching. The "action" of questioning, teaching, observing, and evaluation are what you do anyway. The "research" of designing, noting, analyzing, concluding and following implications are the benefits. So why not join me and the introspective artisans represented in this volume by designing and carrying out your own study immediately. Satisfaction is guaranteed.

ACKNOWLEDGEMENTS

Volume Two of *Classroom Research* was made possible by funding from two sources. I thank Dr. Ernie Bernal, Director of the Division of Research in the Center for Excellence in Education, for a minigrant to aid with typing expenses. Dr. Bernal's office nurtures a broad spectrum of research efforts and he applauded the work done by classroom teachers in this volume. The Arizona Reading Association provided funds for publication of this volume as part of their objective to further knowledge about reading methods that work. Several studies examined the effects of reading strategies or skill instruction carried out by interested teachers. The results indicate the insights gained and adaptations needed to make ideas work in unique situations.

I am most appreciative of Jeanie Sanders' efforts while word processing, formating, and even editing this volume. Sickness in her family, visiting relatives, and hasty deadlines left her undaunted. She remained committed to completing a professional-looking finished product. I relished her enthusiasm and energy while refining this edition. She deserves and receives my standing ovation for her work.

The researchers contained in this volume were very patient while waiting to see the results of their efforts in print. Some of the early researchers waited "years" while I collected other studies to include.

Dr. Ray VerVelde, Director of the Center's Off-Campus Programs was very supportive of the ideas underlying classroom research. He constantly brainstormed with me on how to get the ideas and methods of researching broadcast to teachers. I needed his encouragement and ideas.

I have been fortunate to touch the professional lives and classrooms of all the people mentioned here. My gratification is increased by noting the glint in their eyes as they discuss researching and their own thought processes associated with reflection. Thinking about teaching and how to perfect the processes involved is proving to be rewarding and liberating for all concerned.

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ETHNOGRAPHIC STUDY

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Adopt A Whale

THE SITUATION

The "tale of a whale" all began very simply a year ago last August when my family and I were vacationing in Washington. Having only taught three years previously to this, I spent a lot of "spare time" in the summers looking for new ideas. As I walked through the Whale Museum in Friday Harbor, I noticed a stack of applications to adopt a whale. I grabbed one and started to think of how this could be used in my classroom. Aha! A class pet - it would be perfect! I had raised rabbits and had aquariums full of fish, newts, frogs, and tarantulas. They had all been expensive, time-consuming, smelly, and frustrating at times. How perfect the whale idea would be - no hassle, low cost, and no one could be allergic to it!

And that is how it all started. Adopting the whale became the heartbeat of our classroom. It soon developed into a theme that would play throughout the entire year for my 28 students and me. This research is my reflection over our special year together with my desire to find out exactly what happened?! What effect did organizing a classroom around a year-long theme actually have on these third grade students?

I am writing this report in the form of a calendar with classroom descriptions and my reflections so that you might clearly see what happened in the months that followed. Questions that I have now are: Did the students' ownership of this idea play an important part in the continued interest? Did the outside publicity and attention we received add something to the school environment? Were we finding new ways to learn? Could the teacher actually "let go" of the leadership role and participate in the movement toward a specific goal? Could being an expert in one field carry over into other areas?

AUGUST

On the second day of school I brought out the adoption papers, unveiled the designed "Year of the Whale" bulletin board, and began the discussion of the idea of a whale adoption (Appendix A). After thoroughly going over all necessary information, a little eight year old girl raised her hand and asked, "Can you tell me about how big of a cage we will need for our whale?" And so it began!

The necessary $20 needed for adoption was brought in 50¢ by 50¢, and along with that, children were bringing in whole libraries of books and videos. There was interest!

(Reflections) Hmm, I think this might work! The kids are excited! Could I really get away with it? How can I plan language arts, social studies, and science lessons around this?

SEPTEMBER

My students were bursting with excitement and desire to get into learning more about whales. They were asking, "When will we get to see a real whale?" "Could we go to an ocean?" Prescott, Arizona, a small town hidden in the mountains, did not lend itself to such possibilities. Mr. Bob Williams, our new principal, was asked into our room and one sweet girl was encouraged by others to ask him the "big question." To my surprise, his answer was, "Let's see if it is possible."

We began reading Scholastic's Living Classic Version of *Moby Dick* during our literature time. I also tried to spend five or ten minutes a day reading through the reams of material that had been brought into school by students.

We began the process of selecting "our" whale. Each day we read through the descriptions of about three or four whales (Appendix A). There were over 70 to pick from. It was school as usual in other areas; math, reading, spelling, history, etc. with the exception of a special energy that seemed to be generated as the students interacted with one another.

Near the end of the month we had our annual parent night. The parents asked if the rumors were true. Most of the parents were very positive and like the "idea". There was a lot of discussion as to what a reasonable cost might be, destination, transportation, length of stay, etc. Everyone was aware that our school board had to okay such an idea, but they pledged their support and efforts.

(Reflections) Mr. Williams wrote me a note which read, "See me regarding wearing shorts on the beaches." We sat down and discussed the necessary channels that I needed to begin looking into. He advised me to begin now if I indeed had any hope of pulling this off. He was very supportive. I am scared now. Is this for real? As I tell other teachers that the door is open for me, I realize the awesome responsibility that I will assume. Do I want this? How much extra time will it take? Will it really benefit all of the students? What will other people think? Connie, these are third graders! Easy class pet - eh?

OCTOBER

Parent interest had increased. One parent came forward that wanted to head the necessary fund raising committee with several others promising their time.

October 10th was the day we sent in our adoption papers. We had decided to adopt "Splash," a two-year-old whale living somewhere off the San Juan Islands in the Pacific Ocean (Appendix A).

Each student started compiling a whale folder to house the large supply of information. As I read, the students would work on this. Later in the month, we began a science unit on water habitats. We used our basal science book and learned about the ocean and its plant and animal life from plankton to whales.

Entries in the students' journals were interesting. The class was split into five groups. I used the journals to dialogue with one of the groups daily and the other four groups would write on a topic that I chose for them. They wrote about why they wanted to see a whale, what it would be like to be a whale, and what they already know about whales, etc. Book reports were showing that everyone was reading about the subject also.

The list of fund raisers had to be turned into the district office for approval. Administrators wanted to know how many of the parents actually would allow their child to go on such a trip. Out of 28, 27 said, "Yes." By Christmas the 28th one had become affirmative.

Students made banners and posters for the Halloween Carnival - our first fund raiser. Their favorite poster was, "Have a Baleen Halloween." They were busy writing the necessary letters to people that made this possible (Appendix B). I was a whale for Halloween - what else? (I later wore the costume to the school board meeting.)

(Reflections) The ball is rolling now, and whether I am there or not, it will continue. It "belongs" to them. They know it, and so do I. It feels good! It has always felt better for me to be the "leader" in the learning process, and this is a new one for me. I am not leading; instead I am assisting to steer in a safe direction. I see the students being more excited to be in school. Every subject is interesting! They bring our theme into everything.

NOVEMBER

I began reading a new book to the class, *Prince of Whales*. It was a factual novel and the children loved the innuendoes in the story that would have gone over their heads a month ago.

The teacher who teaches the trainable handicapped children in our school taught three children in our class a song about saving the whales (Appendix C). They, in turn, taught it to the rest of the class. Our class family was growing - a new bond was formed with her class. We had a common interest.

As part of fund raising we took to selling popcorn and candy at events in the school. Different students took turns with mothers assisting. Thank you letters were again written as a class lesson to those parents.

We did our usual Thanksgiving activities, but the whales kept popping up on the list of things children were most thankful for. We made celebrity turkeys out of paper plates. "Moby Turkey" and "Ahab" were quite unique for Thanksgiving centerpieces.

Things were coming together for our trip. Our dreams were beginning to take form. The closeness of this class was unbelievable. We were becoming a very cohesive group with an important goal in mind. New students were being added, and they were welcomed into the fold immediately. The group took it upon themselves to do a lot of one-on-one tutoring to get them caught up. Everyone was involved and there were no outsiders. Slow learners were working as hard as the gifted ones. The desire to learn more did not have to be manufactured - it was there! There was a lot of genuine helping and caring going on.

When we received the final "okay" from the school board, there were fireworks! We did a lot of continuous writing about feelings because they were definitely there ! (Appendix D).

(Reflections) Don't mess up now! Connie, they are counting on you. They are doing their part. I really don't want to be in the limelight - known as a crusader, but look at what is happening. I can see a difference in the children's writings. Now they can all write for 15 minutes without stopping to complain about not having anything to say. Almost all of my lessons have something to do with the whales. It is hard now not to include them in every area. Absenteeism is almost naught. They are bubbling with ideas and questions. I wonder how long this will last?

DECEMBER

With all of the special activities of this month, I thought we wouldn't have much time to "think" about whales, but that was never the case.

We received our picture of Splash and all pertinent information on him (Appendix A). The pictures were copied and laminated so that the students would be able to carry him with them wherever they went. One student even gave a children's sermon about it at church that month. The adoptive parents were proud indeed! As Christmas approached we made salt dough whale ornaments - one each for our tree at school and one for them to take home.

We were receiving donations from various organizations. As a class, the children would always write letters in response. Three of my children from especially troubled homes were improving academically. They had been told that they would be allowed to go on the trip. One of them told me that she was afraid to go. They were as filled with knowledge on whales as the other students. No one lacked the basic skills that prevents some from moving on. One of these children outdid most of the class when it came to remembering facts. I saw others looking up to him for the first time.

(Reflections) It is fun to watch learning taking place because it is useful and meaningful. It seems to be almost effortless for them. They know that they are being observed by members of the entire community. They hear the controversy about us making this big out-of-state trip. We have to prove that this year-long project of ours can work. I have no trouble in motivating them in any subject, for they know "school" is important. They will eat any fish that I throw to them. At this point, I am realizing that it is a trade-off. Teaching is so easy that the other legwork involved seems appropriate instead of instrusive. I do not feel the usual pressure of Christmas; and boy, you should see the wonderful whale "stuff" I received!

JANUARY

Instead of literature, we moved to a subject called "whale study." We were now doing this for at least one-half hour a day. We began studying whales from issues of *Zoo Books*.

This was the month of parent involvement. Over half the class had both parents involved. One of the fathers came in to present a slide show to the children on the whales he saw in Alaska. Another father, a science teacher from the high school, brought in a collection of whale bones and shells from the ocean. (Five different children took turns taking the collection to several of the other classes that were interested.) Still another father set up an appointment for me to meet with one of the local Lion's Clubs. They presented us with $280. The father of a new student said that he would video tape our entire trip if he could come with us - we found room for him!

I met with the parents one evening to get all arrangements made for our big fund raiser, The Whaler's Flea Market (Appendix E). I gave an update on the progress of details on the trip, and the leaders of the parent group took over from there. Children prepared for the fund raiser by making signs and helping in any way that they could. January 23rd was the day of the wild affair that earned us over $900.

We lost a student at the end of this month, which was difficult for everyone. She was moving to Oregon. We told her she might actually see our Splash during migration and that seemed to make it a little easier for her to move away.

Someone from the post office came to interest the children in collecting stamps. Our club was called The Prescott Whalers and individual work began on developing the Save the Whales Stamp (Appendix F).

The children were starting to realize they know more about whales than almost everyone they know. Even their older siblings in other classes were amazed.

(Reflections) Is this a dream? Why is everyone so helpful and cooperative? It feels as if we are a small platoon of people winning a war. Students are all saying,"See, I told you we could do it!" We are further ahead in several areas of curriculum at this time than I have ever been. We are being able to accomplish more and do a better job. There seems to be a restored trust between home and school. There is such a "community." I've never seen anything like it. I cannot explain what is going on - I only know that it feels wonderfull

FEBRUARY

The was "the month." All things came together. We continued working on understanding the facts in *Zoo Books*. We found echo-location to be extremely interesting. Our knowledge level had increased considerably. All students knew and could categorize the many different kinds of whales.

A banner was given to us by a second grade class, a cake from the handicapped children, and cards from several of the other classrooms. Teachers and students throughout our school were extremely supportive.

We had raised more than the necessary amount and were now able to pay for all meals and even have some left over to pay for fish to feed the whales at Seaworld. One parent had bought all of the children and myself shirts that read "Year of the Whale," and presented them to us before we boarded the bus.

Parents helped me get the student notebooks, filled with 43 pages of whale activities that had been found from various sources, ready for the trip. On February 11, at 7:00 p.m., 28 students, 17 parents, and 1 teacher were on our way to San Diego. We boarded a 60-foot boat with a marine biologist on board at 5:30 a.m. for a 2-1/2 hour cruise to see a whale and learn about the ocean. No whales were to be seen that day due to weather conditions so we were thankful that the next stop was Seaworld. There we were able to feed, pet, and watch their whales perform. It was back on the bus at 2:00 p.m. and home by 11:00 p.m.

The following day at school, 22 out of 28 students were there at 8:30 a.m. All but one managed to show up by 10:00 a.m. No one wanted to miss a minute of "whale class."

A parent had made a beautiful whale cake to eat on this "day after." We talked, wrote, and talked some more. We watched the movie Moby Dick and had a Valentine's Day Party.

In the following weeks, we did a lot of "paper talk:" continuous writing as communication between pairs of students (Appendix G). A whale expert came in to see us and explained more on the language of whales. He shared his ideas on a new theory that he was presenting on sperm whales. We "experts" enjoyed sharing in this discovery.

(Reflections) Our trip was wonderful! Can you imagine that spending 28 hours together with 28 children, 6 dads, and 11 moms was enjoyable? It was! It was an experience I will never forget. We were all filled to the brim with "experience." My words can never express what we experienced. I

will never forget a child bending over a whale and hearing "the sound" and then gasping, "Echo-location!" Or how about a child filling her dad in on the important facts he needed to know before we got there. And then there was the little girl that couldn't stop telling me that she wasn't afraid anymore.

I feel a peace that I never thought possible. They had done it with my help, but not because of me. I stood out of the way to make it possible.

MARCH

This was a month where the students began having strong opinions and feelings on the controversial issues of whaling and the care of whales that were kept in captivity. Many of the students were deciding to be whale trainers when they grew up.

One of the mothers wrote a one-page story about a whale and asked if we might make it into a class book. She came in about once a week or so for the next two months. The children worked individually and cooperatively to form the story of *Spouter Jr.* Each child also illustrated one of the 30 pages. It was a real source of pride when it was sent to press. We made enough copies to send to different community members, other classrooms, Seaworld, and approximately 20 publishers. We delivered the whale books, tapes, and puzzle that we purchased for the school to a different classroom each week for the students to share our love for whales Appendix H).

We continued reading more about whales. Several prizes were won by the students at various art and cultural fairs for music, literature, and art using the whale theme.

(Reflections) I see a calmness among the students; there is a slight "lull" in the excitement level over whales, but it comes back while learning our multiplication tables. School is still fun and the best place to be. I have been afraid that after the trip the bubble would break, but it isn't happening. There is a level of self-esteem that the group seems to have attained. They are "cetologists" - whale experts!

APRIL

Two weeks of this month were spent on our annual standardized testing. The usual pressure was not apparent for most students. It was great to take a break from testing by listening to our whale tapes, beautiful orchestra music, using the songs of whales as their theme. It really helped the children relax. We also watched films on whales and the video tape of our trip.

At this point the children were eager to share what they know with others. They loved inviting guests into our room. They also were able to do many more higher level learning skills. They were doing a lot with graphing, questioning, comparing, contrasting, and sending letters to Seaworld with ideas for having the whales live longer in captivity. Everyone was able to do these skills, not the top few high achievers, but everyone!

(Reflections) I ordered blank books and five copies of pictures from our trip for each student and the children began creating their own books about the year, the trip, or whatever they wanted. They are masterpieces. Their themes are all unique. One reads, "Anything is possible if you are willing to work." Another is, "How my dream came true."

We borrowed a set of 25 primary books on whales, and invited one of the first grade classes into our room for paired reading. My students are doing a lot more than reading - they are teaching and loving it!

MAY

Our final Open House - we got to display it all! We hung a giant six-foot plastic whale from the ceiling and offered krill (shrimp) for the parents. Our whale math, writings, and artwork were everywhere.

We taught another third grade class our "basics." They designed how the lesson would be taught, broke up into group, and did an excellent job with cooperative learning. The roles were reversed the following week, and their class taught us about the differences between the forest, grassland, desert, and tundra.

Later we were invited to a fourth grade class. Students from both classes were paired; the fourth graders read a selection from their basal reading book on whales and we read them our book, *Spouter, Jr.*

(Reflections) The end of the year is here, and it is a difficult time. We have become so close, and the children are not excited about breaking up the "family." We enjoyed our "whale study" until the last day. The cetologists are ready to be set free! The letters and comments from the parents, and the growth that has been made are proof that "their" plan has worked.

I feel hollow. Good-byes are always hard, and this is especially so. We have all grown in so many ways, but it is hard to make a closure. The children are asking for a reunion!

REFLECTIONS

Organizing "my" classroom around a year-long theme had a very definite effect on my third grade students. The topic was one that was exciting and interesting and one in which much current literature had been written. Our resources were endless which helped immensely.

Strong relationships are built one at a time, usually not over night. We needed every day of the nine months to fulfill our multiple curricular goals. I found thematic teaching to be a thread that could blend all material together.

I believe my students made great strides this year in many areas, academically and emotionally. A restored trust between home and school enabled a freedom, peace, and excitement that increased self esteem as it encouraged learning. The progress made by many of the individuals was made only, I believe, because of this specialness. My gut level feeling is that this belief that they were special was carried along with them as they left this classroom.

As for my growth, it has to do with being able to see the value in turning the ownership of learning over to the students. I had always felt that for anything really good to happen, I had to orchestrate every part of it. That was my roadblock that made me look and feel tired and which kept others from feeling any real sense of accomplishment.

The students' ownership of our theme was the most important factor; they made the "magic" happen. It wouldn't have been magic at all without this. I participated with them in the

planning and we learned together. We were all leaders, all necessary spokes in the wheel. Can the "magic" be repeated? I don't know. I have some thoughts on subjects for the beginnings in future years, but the students will have to author the rest.

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Appendix A

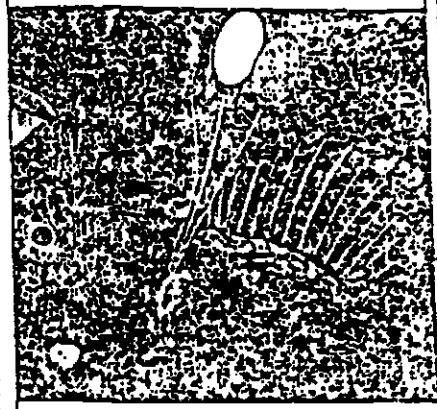
Bargains & Giveaways

Adopt a whale

To find out how to adopt a whale, send for "Whales of the World," a free teaching kit. It has adoption information, plus 11 activity sheets incorporating geography, math, reading, and history. It's designed for early through middle grades.

For $15, your class can also adopt a Humpback whale from a list of 70 that migrate between Cape Cod and the Carribbean. If you adopt, you'll receive a photo and biography of your whale, a certificate naming the class as its official protector, a whale calendar, a map of the whales' migration routes, and a subscription to *Whalewatch*, a quarterly publication that reports on current sightings of whales.

Cost: Teaching kit, free. Order from: Whale Adoption Project, Dept. LRR, 407 State St., P.O. Box 1372-027, Santa Barbara, CA 93102.



Dancin' dinosaurs

Delight your dinosaur fanciers with an album/cassette and free poster. *Once upon a Dinosaur* puts facts about these prehistoric creatures to music, with such songs as "The Reptile Rap," "Dinosaur Dance," "The Plant Eaters," and more. The songs are most appropriate for grades 2 to 4, and lyrics are included. The poster, featuring dinosaurs in a playground scene, promotes the album and lists the songs it contains. You can order the poster and album separately.

Cost: Poster, free; include $1 for shipping. Album or cass[illegible], $10.50;

News and Tips

Adopt a Whale!

How would you like to adopt a humpback whale? No, don't worry about how to get him through the front door, the tons of plankton he'll eat each day or the need for an olympic-size pool. You can do it in name only. These magnificent leviathans are now facing extinction because of indiscriminate whale hunting. But thanks to the International Wildlife Coalition, you can help preserve this rare species of mammal.

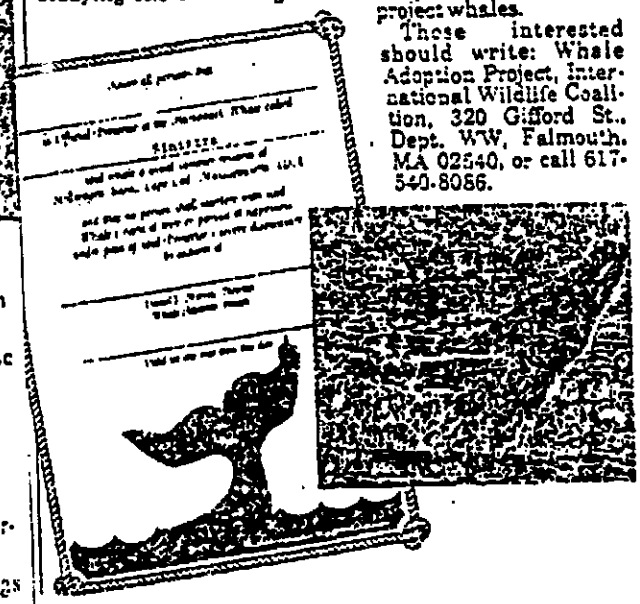
A $15 adoption fee to the Whale Adoption Project helps fund the expansion of whale research projects and protection programs.

Researchers are already studying one of the largest humpback families in the world—which makes its home off the northern coast of Cape Cod—using funds from the project. Among their findings:

- Their distinctive tail fins, or flukes (giving the appearance of a humpback), are as individual as human fingerprints.
- Whales have distinct personalities. Some are playful, some are showoffs, some are introverts.
- Humpbacks sing. It's speculated that they use songs to communicate.

To adopt one of these 40-ton darlings, a prospective "parent" chooses one from a list of 70, which describes each whale's character and appearance. A photo of the whale—such as Sinistra in our photograph—is sent to the person, along with a certificate naming the person as its official protector, and *Whalewatch*, a publication that reports on sightings of project whales.

Those interested should write: Whale Adoption Project, International Wildlife Coalition, 320 Gifford St., Dept. WW, Falmouth, MA 02540, or call 617-540-8086.



Only seventy-seven magnificent

Every orca can be individually identified by the shape and composition of its saddle patch and dorsal fin.

Orcas ply the waters of Puget Sound. They live in small family units known as pods and take good care of their young. They feed, travel and frolic together. Unlike nearly any other species on earth, the Orca shows a highly developed intelligence, an acute sensitivity and a remarkable ability to communicate through language.

The Orca has been known popularly as the "killer whale". This has a ring of the dramatic to it, but is very, very far from a genuine description of this large but gentle mammal. The Orcas of Puget Sound feed on salmon and other abundant ocean and Puget Sound fish and are hardly the killer sort. The notion of "killer whale" has, until recently, however, helped to justify their hunt, killing or capture as an acceptable, if not even a romantic adventure.

The dorsal fin of adult bulls can grow to 6 feet in length, the fin of females and juveniles grows to 3 feet. Adult orcas reach lengths of from 22-30 feet and can weigh up to 4-5 tons.

Between 1965 and 1976 unrestricted netting and capturing threatened the Orcas of Puget Sound. Out of a frighteningly limited population, 37 Orcas were captured and kept. Ten Orcas disappeared apparently unable to survive the capture process. Due to outcries from researchers, state officials and the public alike, the State of Washington enacted landmark legislation in 1976 banning the capture of the Orca.

The lifespan of the orca is unknown, but is at least 50 years, and may be as long as 100 years in females.

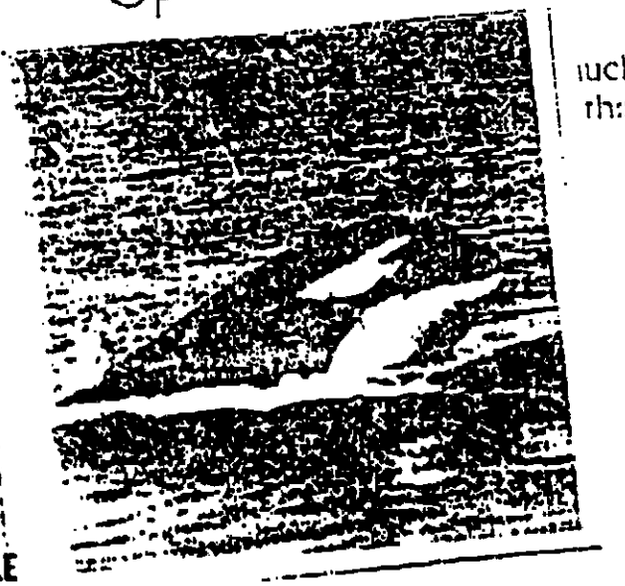
The magnificent Orca is not out of danger yet. Our seventy-seven Orcas are now facing the even more ominous threat of environmental pollution. We don't want for our Orcas what has happened to the California condor whose total population in the wild is now less than 10 birds due to the adverse effects of environmental pollutants.

Help protect the Orca

scientific and neg

much
that

- Splash -



L-67 "SPLASH" Child of Grace

The Whale Museum

hereby declares that

MRS. MILES THIRD GRADE CLASS

MILLER VALLEY SCHOOL

is helping to protect the killer whale (*Orcinus orca*) known as

L-67 "SPLASH"

& increase our knowledge of orcas in the wild.

November 1987-88
Adoption Period

Susan Vernon
Executive Director

The Whale Museum, PO Box 945
Friday Harbor, Washington 98250
(206) 378-4710
Whale Sighting Hotline 1-800 562-8832

Mucllps Celological Society *A nonprofit research and educational corporation*

THE WHALE MUSEUM

The Orca Adoption Program

Research • Education

P. O. Box 945 • Friday Harbor, Washington 98250 • (206) 378-4710

L-67 "Splash" Child of Grace

Splash is a new infant member of L-Pod, which is an extended family of 48 orcas (killer whales) resident to the inland waters of Washington and British Columbia. Splash was born sometime during the winter-spring of 1985. Splash's mother is Grace (L-2) and her 11 year old sister is Orcan (L-39). Splash and her family can usually be found traveling in the subgroup associated with Oskar (L-1), Canuck (L-7), Victoria (L-35), and their offspring.

In addition to the unique shape of their dorsal fin, Splash and all the other orcas can be recognized by the white saddle patch pattern on each side below the dorsal fin.

The resident community of 77 orcas, J,K and L-Pods, often join together to socialize and feed upon the migrating salmon in the summer and fall. In the winter K and L-Pods go out to the outer coasts of the Olympic Peninsula and Vancouver Island to feed on wintering sockeye and pink salmon, while J-Pod stays in the inland waters feeding on chinook salmon, rockfish and herring.

Appendix B

October 7, 1987

To Whom It May Concern:

The students in my third grade class and I would like to request permission to take a trip to San Diego for a day of in-depth study concerning the whale and its habitat.

In August, we decided that we would adopt a whale as a class pet. From that point on, the interest in learning more about whales has grown tremendously. Many of the students have expressed an interest in seeing and experiencing these endangered animals in as natural an environment as we can provide.

I have contacted N.J.Palmer of Project Exploration. He is a teacher working with the Mesa School District and has been organizing trips such as this for ten years without a mishap.

The buses provided by the company are luxury Greyhounds with reclining seats and restrooms. They have a five million dollar insurance policy on the bus and five thousand dollar coverage per incident of accidental death for riders. There have been no claims filed. The company provides relief drivers for safety reasons. Punctuality is a priority. They will arrive within fifteen minutes of the proposed time.

We will be leaving Miller Valley School in the evening. To insure as much rest as possible, lights are out at 10:30 p.m. with no talking allowed.

We will arrive in San Diego Harbor at 5:30 a.m. to board a harbor cruise boat with a marine biologist on board. The biologist is provided by the San Diego County Schools. Students will seine for plankton, do water samples and test them, and dredge the bottom for specimens of sea life. Sea life will be sorted and put into aquariums on the boat along with a discussion by the marine biologist. We would like to plan the trip for sometime in January or February as there would be a good chance of seeing a humpback whale at that time because of migration habits.

Later in the morning the kids will eat breakfast and travel to Sea World for a two hour educational tour provided by the park staff. The students will be able to see and learn more about the orca whale which is the species that we are adopting from the Orca Adoption Program in Washington. We will return by 10:30 p.m. One day of school is all that will be missed.

We all realize that allowing a third grade class this priviledge is an exception, but we hope that you will realize that it is an important part of a year-long study of this unique mammal. We set aside part of every day for study and/or discussion on the whale. We currently are reading the classic Moby Dick and are in the process of picking one of the 73 whales in the Puget Sound for class adoption.

Fund raisers that we are planning include letters from students to various service organizations requesting their support, a booth at the Halloween Carnival, a rummage sale, and ice cream sales.

There will be at least ten adults in attendance, making no more than three to a group to be supervised. The total cost will be $67.50 per student. Students and the teacher will pay $25.00 each. Parents will pay all of the $67.50. Scholarships of $25.00 could be presented to any child not able to afford it.

Thanks once again for your consideration.

Sincerely,

Connie Miles

PROJECT EXPLORATION, Inc.
2123 East Encanto
Mesa, Arizona 85203
(602)*964-7572

Contributions to: 15
3 Miller Valley 3rd Grade 800-13-77

SEA QUEST I

Please place on check.

Dear Oceanography Applicant:

On Feb. 10, I have chartered a bus and a boat and have made arrangements at Sea World, in San Diego, to have a special educational tour of that facility for you and your classmates. The bus and co-drivers will pick you up _____ at 6:30 p.m. - Leave at 7:00 p.m.

This trip is identical to workshops I have taught in years past for teachers, as well as other trips I have conducted for high school, junion high and upper elementary students. If you are interested in oceanography, this trip is an outstanding opportunity to further your knowledge in this important area.

The fee includes chartered bus transportation (air-conditioned with a restroom), boat charter (with marine biologist instructor), entry into Sea World in San Diego for a marine science education program. The students will have free time in the park for lunch (not included).

Although the itinerary may vary with each trip, we will follow this basic timetable:

- Travel by bus from your school to San Diego;
- On board oceanographic vessel studies (early A.M., dress warm);
- Sea World education tour and program;
- Travel home late afternoon for late evening arrival home.

~~To hold your reservation, please provide a check or money order payable to Project Exploration, Inc.~~ There is room for only forty (~~40~~ 44) participants, on a first-pay, first-serve basis.

Here's hoping you can join us.

Reservation deposit _____

Balance due _____

TOTAL $ 25

N.J. Palmer
President, Project Exploration, Inc.

* By Feb. 5

Upon payment of Reservation Deposit pick up "Parental Consent Form," and "List of Items to Bring"

Appendix C

Song taught to the students by another teacher.

1. Have you gazed out on the ocean,
seen the breaching of the whales?
Have you watched the dolphins frolic in the foam?
Have you heard the song the humpback hears
five hundred miles away.
Telling tales of ancient history of passages and home?

CHORUS:

I want to live,
I want to grow,
I want to see,
I want to Know,
I want to Share what I can give,
I want to be,
I want to live.

(...ter the ...al board ... made their ...ision.)

"They said Yes!"

Emily

When I got in my class I couldn't believe what I saw on the chalk board! I felt like a balloon! I think we're going to have a GREAT time!

Erica San Diego or Bust!

I feel great!
I think that it is a great idea because I have seen [illegible] whale

I Feel excited and happy about going to San Diego. I think it is going to be very fun and neat because they are so pretty to look at. I think it is going to be neat to sleep on the bus with my friends, and it is going to be neat to go on the boat and see all the whales. It is going to be neat if my dad can come!!!

Tricia Phillips

Christina N.

I'm feeling so, so happy!!! That It will be fun in San Diego. I can't wait to see the whales, and if I see the whales. It will be so, so neat. I have never gone to San Diego. It will be neat to find all the whales and get to take [illegible] some. They said Yes!!

Janice

How I feel right now is very, very, very happy and proud that I might see my baby!

What I think right now is I'm very very, very proud and very, very, glad.

Cory

I feel very, very happy about the whales. I'm going to sleep with my friends. I am proud of [illegible]. If we didn't have [illegible] what would we do?

Appendix D

San Diego or bust

I feel very, very, very, very exited
to go to San Diego. I think that
this is the most exciting time in
my life.

LETS CELEBRATE!

I feel very excited about
it and I [illegible] that we
will have a [illegible]
at San Diego.
I think that we
will [illegible]
[illegible]
San Diego.
We are going to be very good and not
talk [illegible]!

I feel very happy and I [illegible] to [illegible] the Whales [illegible] happy [illegible] a [illegible] whale. One of these days I would like to [illegible] the whales all time. I feel [illegible] going to [illegible] on a boat. I never been on a boat.

[illegible] fun! And I think [illegible] going [illegible] looking [illegible] the whales. I think that [illegible] going to [illegible] the [illegible]. I think they are pretty

I very happy that [illegible] can go to San Diego [illegible] see some whales because I [illegible] never seen a whale. And I [illegible] [illegible] a whale before. I think it is very neat to go to San Diego. It would be neat to go and see whales and it would be neat to sleep in the bus!

I feel happy, because we get to go to California to see the whales when they migrate in the winter. I think that whales are so cute and friendly. I hope when I grow up there will be whales too. I'm glad that they said yes!

I'm so happy we are going to SAN DIEGO! I think the whole class is happy & I know I am & I'm sure Mrs. Miles is happy.

I feel very exited and happy worried, cold and great and like I am going [illegible] [illegible] up. I feel that I'm turning into a whale! I think that when I grow up I want to be a scuba diver. I think that I will study whales all my life. My favorite whale is the killer

18

COME TO THE WHALERS' FLEA MARKET

SATURDAY, JANUARY 23rd

8:00 A.M. – 3:00 P.M.

Miller Valley School Cafeteria

LOADS of Quality Used Items at low prices!

Pop and hotdogs!

Baked goods!

Coffee and donuts!

Raffle prizes!

FUN!!

Popcorn!

Come and Bargain!

Sponsored by Mrs. Miles's 3rd grade class to raise funds for a whaling expedition in San Diego, California

20

January 5, 1987

Dear Parents,

Now that the holiday excitement and activities are behind us, it is time to direct our attention to our class trip to San Diego.

We have been working very hard to raise the funds necessary to realize our goal. As a result of ice cream sales during lunch, a booth at the Halloween Carnival, refreshment sales during school bonus movies, some donations, newspaper and aluminum can recycling, etc. we have raised close to $600.00! We have reached the halfway point in our fundraising, but the time to go is very close. We will continue to sell ice cream during lunch, which will add to our coffers, but are counting on funds to be raised through our WHALERS FLEA MARKET. Our flea market will take place on Saturday, January 23rd, at Miller Valley School. We realize that it has been difficult for some parents to help with our previous fund raising activities, which took place during the school day, but are really counting on <u>at least one parent or adult member</u> of the family to help with our flea market. We cannot proceed with this project unless we have the necessary help. Adults will be needed to put up posters in various places in town, to help with pricing and set up on Friday, January 22nd, to work the booths along with our students, help with food preparation in the food booths, clean up, etc. As you can see, we need to unite in our efforts to make this fund raiser a huge success and make the trip to San Diego a reality for our children.

On Tuesday, January 12th, at 6:00 P.M. there will be an organizational meeting in Mrs. Miles' room. We will share ideas, form any necessary work committees and work out all details at this time. Please make every effort to attend. Will you kindly fill out the form at the bottom of this letter, whether or not you are planning to attend the meeting. Please have your child return the form to Mrs. Miles <u>no later than Friday</u> of this week. Thanks! The excitement is mounting and we can reach our goal! Let's do it!

Sincerely,

Bev Harvey

Bev Harvey

☐ Yes, I am willing to help and will work the Flea Market.

☐ No, I cannot help. Another member of our family can help, however.

☐ No, I cannot help.

Name_____ Phone: _____

Benjamin Franklin Stamp Club

CLUB CHARTER

This Charter
is granted in recognition
of the establishment of the

PRESCOTT WHALERS

Chapter of the
Benjamin Franklin Stamp Club

JANUARY 28, 1988

Tom Thomason
POSTMASTER

Appendix G

(Copies of students' writings).

I realy like this book alot. My picture in the book really discribes what it says. I would probably like to continue on writing a part 2. It is a nice book I'm glad the whole class could make a book like this. I will keep this book forever. I would like to make a part 3, 4, and make 5. Whales are specil epcily Spouter Jr. Spouter Jr. was named by the class. The class voted on that name. I really like the dedicaction. The book is very well done. I will keep this book forever and ever. In the story Spouter Jr. was a very freindly whale.

?	!
Why do Sperm whales eat squid?	A Narwal is a Unicorn whale!
Do Sperm whales disorient squid with a sonic boom?	Dolphins use echo-location to fill the bones and air bags!
What is a desmo?	Dolphins can make sounds up to 7.29 desmos!
	Dolphins have a weapon!
	The echo-location comes from a fatty tissue called a melon!
	Orca whales are the most likely to use stunning echo-location!
	Squids have sharp claws that can tear off a sperm whale's head! A pistol shrimp can make a loud sound to capture the fish!

(Notes from viewing of a video tape.)

(Continuous writing)

Once upon a time Mr. and Mrs. Spouter were
exited because Mrs. Spouter was go to have a bay
then the other whales gatherad aroud her then
a head poped out it was a baby boy named
Spouter Jr. Then some fish came and some of
the whales got some fish for the mama
whale. The next day the baby went to get
a fish. but the fish was to big to
get into to babys mouth so he went
back to his mama to get some fish. The
other day he was big anofe to go
by him self. to get some fish when he
tried to get a fish a Shark came
and bit some of his tail off but
his tail got better. The next day a
boat came and droped a net in the
water and caught Spouter and his
parents and took them to sea world where
his uncles were spouter got used to
there then one day he was doing
lots of tricks with out being trained
by a traine so the trainer gave
him about ten fish so the next
day they put a show on and spouter
and his parents preformed in a show
and got five fish. the next day
he performed by him self he did lots
of tricks he even stuck his tough out.

3rd Person

I know a gril named Janice who went to San Diego with her class. They went to Sea World and went to the Shmui stadem. And then they got back on the bus and went eat pizza she had a good Time Then they got back on the bus and played games for a few hours and then they went to sleep.

THE

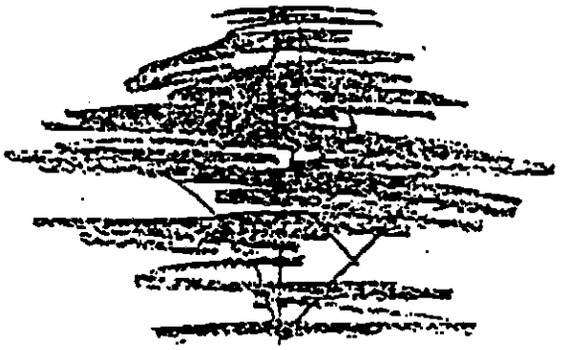
END

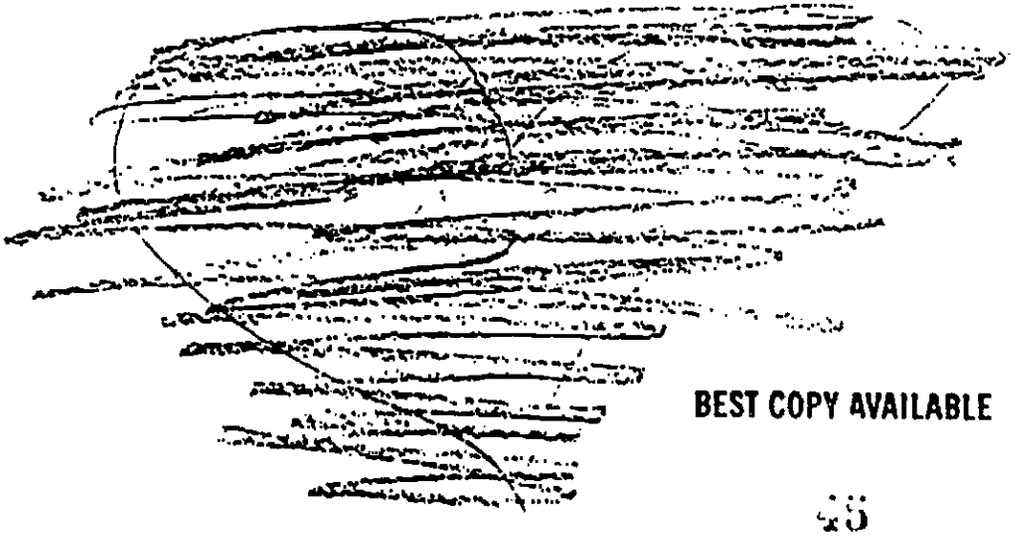
(Continuous writing for 15 minutes 2/19/89)

Once upon a time, there was two California Gray whales named Mr. and Mrs. Spouter they were traviling down south from Alaska to California. They traviled for many miles from Alaska to California very fast because Mrs. Spouter was expecting a baby whale called a calf. They arived just in time for the baby whale to be born. All of the females stood around Mrs Spouter. Then all at wants Mrs. Spouter his milk became to flow and out pop a little whale. Mr. and Mrs. Spouter named him Spouter Mr. Spouter was proud of his son. A year later Mrs. Spouter was in birth again this time it was a girl. Mr. and Mrs Spouter named her Splash. Spouter Jr. and Splash would play all day in the warm sun. Time did fly fast. And sung it was time to go up north again. By Erica Taylor

1st Person:

I had fun on the trip with my dad. My dad was embarrassing because he smoked alot and sung songs alot. My dad was nice and was fun. Me and my dad got splashed by a pilot whale. We got to pet the dolphins and spank them. Me and my dad had lots of fun. Ryan D. and me got squirted by Shamu.





28

My Unusual Pet

My pet is an orca whale. This is unusual because I don't know any one who has one.

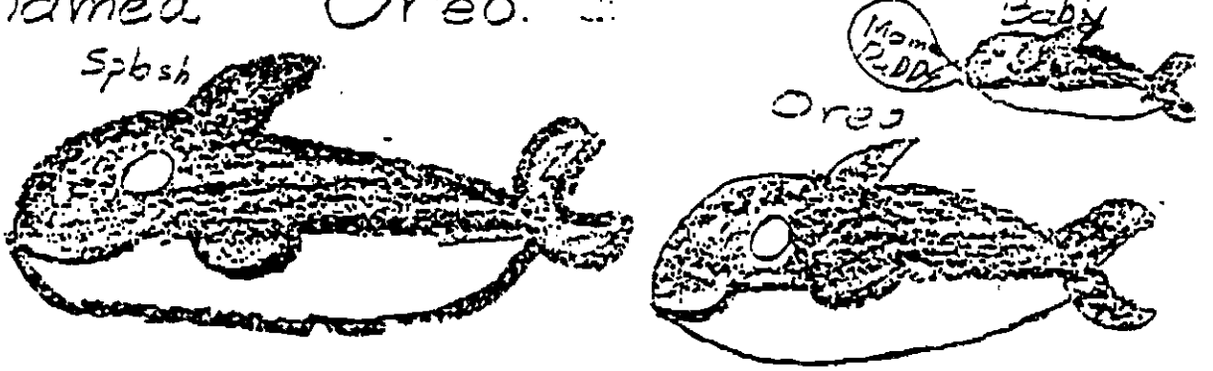
My orca whale will eat any thing you give him.

I will keep my pet in large tank full of water.

We will go swimming and diving. to I want it because it is unusual.

Its name is Splash.

And he has a girl friend named Oreo.

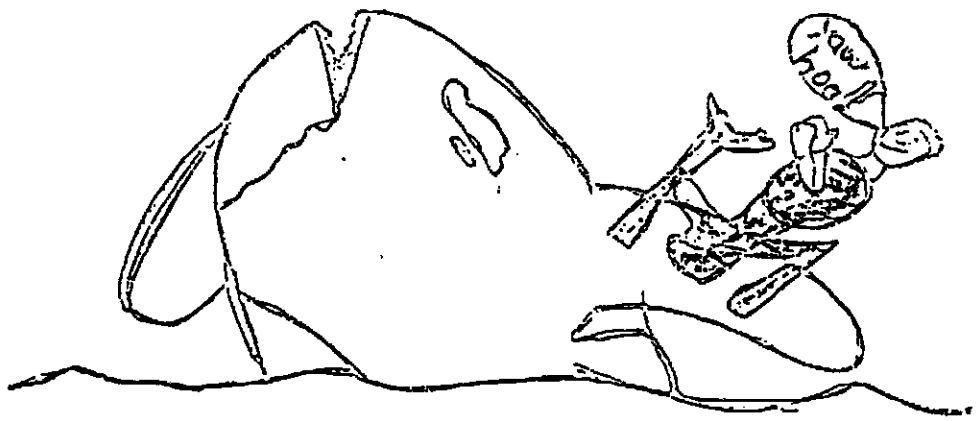


I am going to write a book called Eddie And The Camping Trip. I like Spouter Jr. the friendly whale, and it took lots of cooperation! I also think Spouter Jr. was brave to save that girl.

I want to be a book-writer!

Someday ill be a famouse writer like Judy Blume!

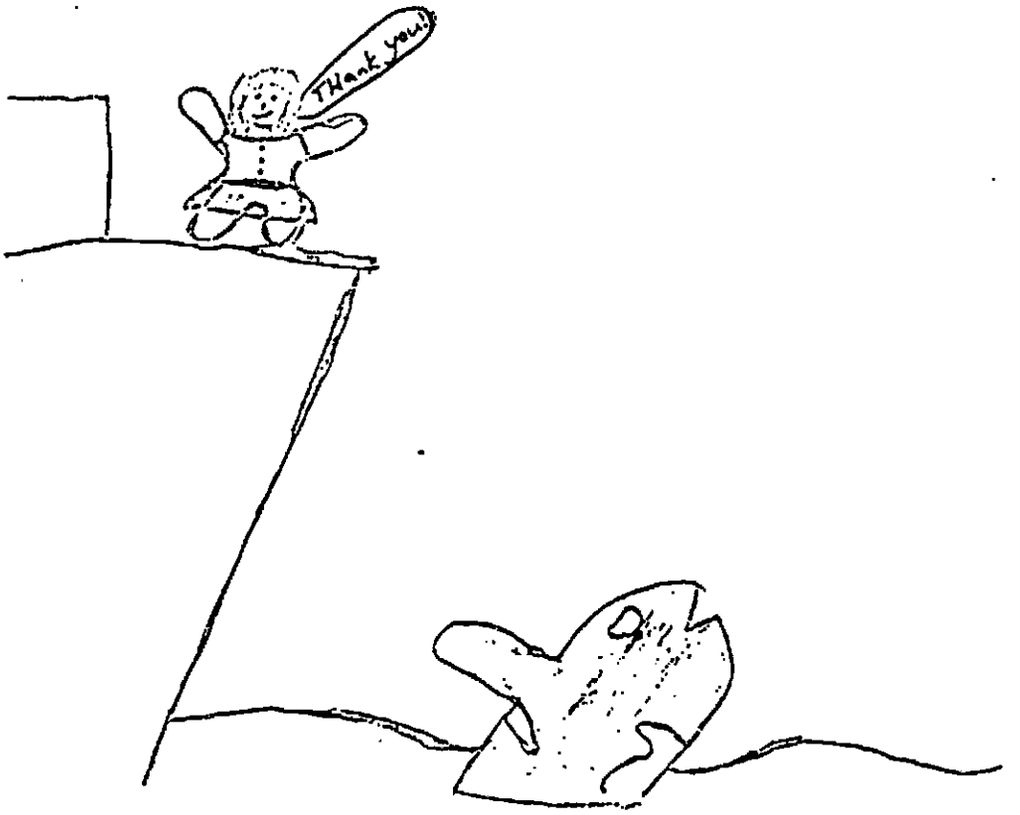
Appendix H



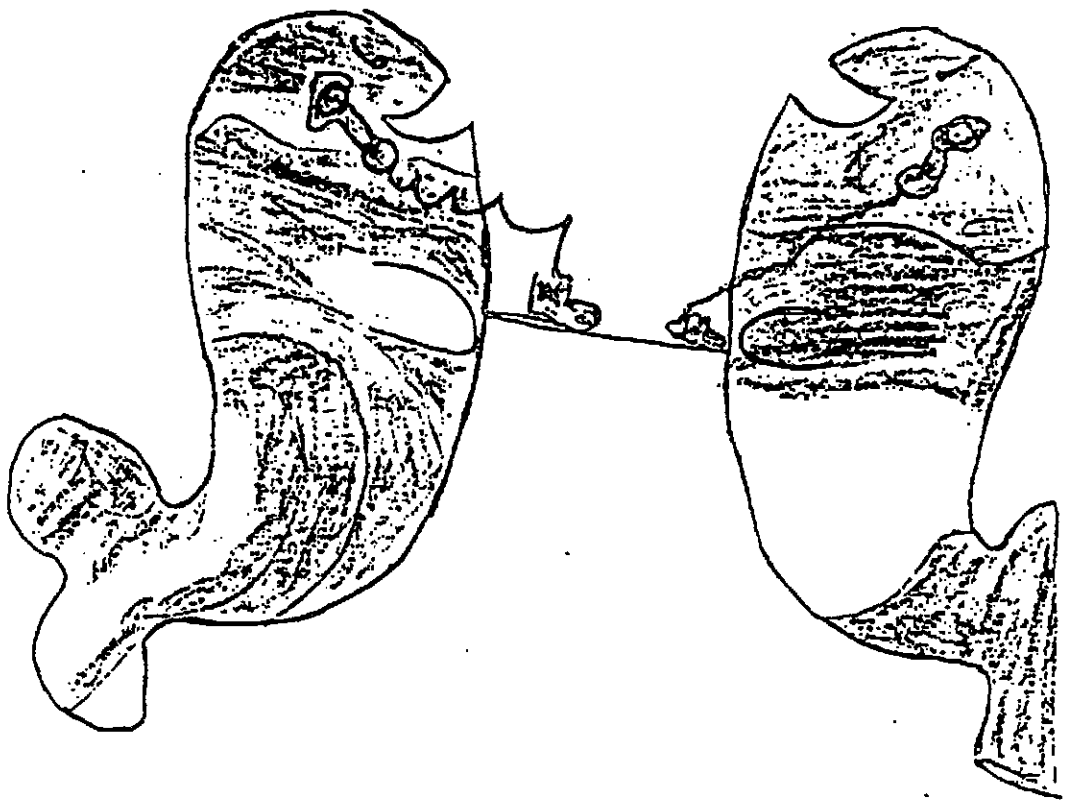
Phillip Mc

When the children saw all of the whales, they were so excited! The friendly pod invited them in for rides. For the rest of that day, until sunset, the children took turns galloping through the sea on their "broncos." What a day!

28



This was Spouter's chance to save the day. Down, down deep he went. He grabbed the child, swam back to the surface, and placed her on the bow of the boat.



hoping they would see. He felt a little sad knowing he'd been too busy playing.

Spouter Jr. wanted the kids to have a great day at Sea World, so by using his special communication, called echo location, he let his cousins at Sea

ADOPT AN ORCA

IT'S A SIMPLE AND FUN WAY TO HELP US FURTHER KILLER WHALE RESEARCH.

K-14 "Leia" ***Mother's Helper*** Leia is a juvenile female member of K-Pod. Leia is the second offspring of Sounder (K-3) and only the second calf born in K-Pod during the last 12 years. She was born in the winter-spring of 1977, so she is 9 years old. Leia spends most of her time traveling with Sounder and her new baby sibling, Opus (K-16), who she sometimes gets to help take care of.

K-16 "Opus" ***A "Bloom County" Fan*** Opus is the newest calf in K-Pod. Opus is the second offspring of Sounder (K-3), and only the second calf born in K-Pod since 19"4. Opus's sister is Leia (K-14) who was born in 1977. Opus, Leia and Sounder spend most of their time traveling with Morgan (K-4), Georgia (K-11) and Sequim (K-12).

L-1 "Oskar" ***Podner's Partner*** Oskar is an adult male member of L-Pod. Oskar has been documented since 19"4. He spends much of his time with the young bull Podner (L-6) and Victoria (L-35), as well as Victoria's calves Shala (L-50) and Ino (L-54).

L-2 "Grace" ***Orcan's Mother*** Grace is an adult female member of L-Pod. She was first documented in 19"4 as an adult and is the mother of Orcan (L-39). She often travels with Orcan, Canuck (a female) and the young bull Podner (L-6), who may be her son.

J-22

L-3 "Oriana" ***Island Traveller*** Oriana is an adult female who is documented to be over 22 years old in 1984. She is the mother of Nootka (L-51) and travels with members of L-Pod. Her companions are Nootka, Olympia (L-32) and a young bull named Dylan (L-38).

L-4 "Sonar" ***Elder "L-Pod" Lady*** Sonar is an adult female over 26 years old. She is the mother of Astral (L-61) who was born in about 1970 and Nugget who was born in 19"3. Sonar is one of the oldest verifiable females of her pod.

L-12 "Alexis" ***Out on Her Own*** Alexis is an adult female member of L-Pod. Alexis ranges from southern Puget Sound to the Campbell River and west to the coasts of Vancouver Island and the Olympic Peninsula. On the coasts she follows sockeye and pink salmon with the rest of L-Pod. Alexis has never had her own calf. She usually can be found traveling in the subgroup associated with the adult bull Ojum (L-10).

L-14 "Cordelia" ***No Heirs*** Cordelia is a young adult female member of L-Pod. She is the daughter of Tsunami (L-23) and was born around 1969-"0. In 1981, Cordelia's younger sibling, L-49, died and in 1982 her mother died or disappeared. She has not yet had a calf and usually can be found traveling in Oskar's (L-1), subgroup.

L-17 "Pacheena" ***Funny Fin*** Pacheena is a young adult male member of L-Pod. Pacheena was first documented in 19"4 as an immature male between three and five years old. In 19"6 he began showing definite signs of dorsal fin growth, but since then his growth has been slow; it may be that it is stunted. Pacheena is a member of the subgroup of five whales that appears to have joined K-Pod, a group of 10 whales.

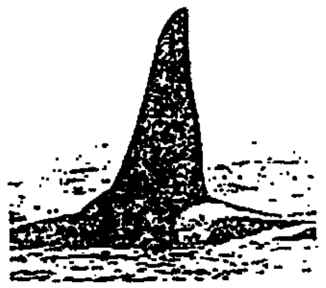
L-18 "Kiska" ***A Joiner*** Kiska is an adult female member of L-Pod. She is over 24 years old and was first documented in 19"4 as an adult. At that time she had a calf (L-46) which was born around 19"2. In 1981 the calf died or disappeared. Kiska is a member of the subgroup of five whales that appears to have joined K-Pod (a group of 10 whales).

L-21 "Ankh" ***Independent Mother*** Ankh is an adult female member of L-Pod. Ankh has been documented since 19"4. She is the mother of Marina (L-47) and Flash (L-48), who died or disappeared in 1982. It is not clearly known with which subgroup she and Marina are associated.

L-22 "Spirit" ***The Changer*** Spirit is a young adult female member of L-Pod. Spirit was first photographed in 1974 as the four year old calf of Olympia (L-32). Spirit was thought to be a male up until 1985, because her dorsal fin looked like it was getting too big to be that of a female. But in 1985 Spirit gave birth to Sumner (L-69), making it clear what her sexual affiliation is. Spirit was 16 when she gave birth to her first calf, suggesting that sexual maturity in these orcas may not occur until as late as 14 years of age. Spirit and Sumner spend their time traveling with "grandma" Olympia, and Olympia's other offspring, Cleo (L-44) and Scotia (L-63).

L-32 "Olympia" ***Grandmother Whale*** Olympia is an adult female member of L-Pod. Olympia was first photographed in 19"4 as an adult female with a 4-5 year old calf (Spirit, L-22), so researchers estimate she is at least 33 years old. In addition to Spirit, she is the mother of Cleo (L-44), who was born in 19"5, Disney (L-56), who was born in 19"8, but died in 1982, and Scotia (L-63), who was born in 1984. Olympia's oldest daughter, Spirit, just gave birth to her first calf, Sumner (L-69), in 1985, making Olympia a confirmed grandmother.

L-33



L-33 "Chinook" ***Unknown Origin*** Chinook is a young adult male member of L-Pod. Chinook was first photographed as a juvenile about 6 years old in 19"4. It is not clear who Chinook's mother is, but he spends a lot of time traveling with Sarah [illegible] and [illegible] so it could be one of them. In 19"" Chinook's dorsal fin began to get noticeably larger, and by 1985, at the estimated age of 1" he seemed to have reached physical maturity.

L-35 "Victoria" ***Queen's Namesake*** Victoria is an adult female member of L-Pod. She was first documented in 19"[illegible] as the mother of [illegible] year old Shala [illegible] she gave birth [illegible] They spend most [illegible] the subgroup associated with Oskar (L-1).

L-38 "Dylan" ***Young and Restless*** Dylan is a young adult bull orca who is a member of L-Pod. He was first photographed as a juvenile in 19"4. In 19"[illegible] Dylan's dorsal fin began to grow much larger than the females in his subgroup, Oriana (L-3), Misky (L-28) and Olympia (L-32). Even in 1985 Dylan's dorsal fin has appeared to grow larger.

L-39 "Orcan" ***Child of Grace*** Orcan is a young adult and was born during the winter-spring of 1974-75. She and her mother, Grace (L-2) spend much of their time traveling in the subgroup of whales associated with Podner (L-6).

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ETHNOGRAPHIC STUDY

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Teaching SQR to High School Students

THE SITUATION

My problem has been the textbook used by my district to teach World Geography. I have felt that the book is written on a higher reading level than one at which many of my students can comfortably function. The book, *World Geography Today* published by Holt, Rinehart & Winston, is written at a 10th grade reading level according to the publisher's information. My students are primarily 9th graders; I have 16 students who are higher than 9th grade. This book was chosen by another teacher three years ago when World Geography was offered as an upper division elective. The book is now being used as a freshman, required course textbook. This is where the problem begins. The book is a good book, just too hard for the cross-section of students that I work with everyday. The problem is compounded by the fact that the class must be taught in one semester.

QUESTION

Will the SQR Reading Method help my students read and understand their World Geography textbook at a higher level resulting in higher chapter test scores?

POPULATION

I started the project with 163 students, but my class totals dropped to 152 students by December. I had considered doing only one class and comparing results with another class, but I know I'd be charged with being unfair. Instead I chose to treat all the classes the same and compare each student's work to their previous work. This class is not leveled or tracked in any way. For many of my students this was the first class they took that was not leveled. My lowest level reader was been tested at a 4.2 grade reading level and student scores ranged up to 12+ grade reading level. The classes were large, averaging 32 to 33 per class. The class period was 55 minutes, with class meeting every day.

PROCEDURE

What I decided was to introduce survey, question, review (SQR) to my classes. I had hoped that by introducing this method, my students would have an objective approach for comprehending and retaining the textbook information. It seems that sometimes those of us who teach secondary content classes tend to concentrate so much on our particular facts and figures that we forget to teach how to read and remember.

PROJECT SUMMARY

On the morning of October 3, 1988, I entered the classroom ready to go. I was brimming with PMA (positive mental attitude). The grades in the class up until this time were low, with about one third of the students failing the tests. I just knew this method would help both my students and myself. With this attitude I started the class by asking a simple question: "Who would like to get better grades in this class?" An overwhelming majority responded favorably. I took this as a good sign. So I told them I had a plan that would help them understand the book, and even went so far as to tell them they might even enjoy the class more. I asked them to list what they thought was causing the low scores. I received the usual answers ranging from "Teacher is boring" to "The room's too hot." One idea kept coming up though: "The book is too hard." After this discussion, I had the perfect lead-in to my plan! I explained the idea of reading for a purpose. If you are reading to answer a question, you should retain more of the information being read. I showed them a World History book written by Gerald Leinwald that starts each section with a question. "We are going to write our own questions for the geography book," I explained. I walked them through the first section: the first sentence of each section is in bold print so the sections I wanted them to work with were easy to recognize. I explained how to survey each section. I suggested they read the first and last two lines of each section. Next, take that information and compose a question about that section. Next, read carefully the section and answer your question. At this point, they were all with me. I explained that they would be expected to do this for each of the sections of the assigned chapters. I would collect and assign points for their efforts. Things were okay until they tried to do a few sections by themselves in class. They became terribly frustrated over composing the questions. Many, I discovered, could not tell me the main idea of the section. We spent the rest of the day and all the next working on the first chapter in class. I felt like a forest firefighter running around trying to put little fires out: just as I thought I had one under control and on the right track, there would be five more cries for help. I started to sense tremendous frustration building. I kept assuring them that it would get easier with practice. Most looked at me in total disbelief.

By the end of the first week, my classes were in a shambles. Frustration had totally overtaken the climate of the classroom. A very good student with a 97% average, came into the classroom beside herself. She blurted out,"I hate you. No, I don't hate you, I hate geography. No, I don't hate geography. I hate, I don't know what I hate but I do know I hate this." She expressed what many of the students were feeling. For me, an interesting observation was how all of this affected my discipline and class atmosphere. My once wonderfully mellow classes were gone and I was facing a hostile rebellion.

After the first test, some of the complaining stopped. The scores didn't improve the way I had wished and hoped for. The average improvement was eight points. No one did worse which I took as a positive sign. I told myself it was still too soon to see an effect so we kept going. As the weeks progressed, I started to notice patterns. The top students seemed to be having more trouble than the lower students. I tried to determine if this was because they felt this method was beneath them or if they simply didn't like the extra work. Some said they had a method that worked for them. The lower level students seemed to be growing into the method. Another student, for instance, actually became happy with the system. I talked with his reading teacher and she said he needed structure. This assignment seemed to provide for that need. I also noticed that other lower reading level students seemed to like the assignments. Test scores did inch upward for these students.

After successfully putting down the mutiny for three weeks, I moved on to what I call Phase II. I told the students they could choose to complete the assignment, receiving extra credit for their efforts (never ask high school students to do something for nothing). I explained that those who chose to go on would get not only the benefit of the higher scores but also some extra

credit. I expected to get a standing ovation; I barely got an excited "Oh!" The first week, only 18 of 152 students completed the optional assignment. Better scores on the tests continued. The next week, only six completed the SQR worksheet and almost all the grades dropped. We talked about this in class and why it happened. Amazingly, the next week 42 students participated. All of them found success with the system. By December the numbers had leveled off to around 40-45 students completing the optional worksheets, not quite one third of the students. I was happy with this number. Some of the top students felt they didn't need it, and some of my low students unfortunately just didn't care. I felt the SQR procedure worked much better after I put it on a volunteer basis rather than as a requirement. Most of the test scores raised one grade level and have since leveled off.

Here are three examples of students' work. Notice Student 1's work is extremely detailed. She had a difficult time with main ideas. Instead, she copied the book. Student 2's question is very broad. Student 3's questions were much more to the point as are her answers. Student 1 and Student 2 did not continue; both found this system frustrating. Student 3 found success and continued for many weeks.

Student 1

What is known about Saharan Africa?

Records are sparse because there are no written records. Kingdom of Kursh is described by Greek in 5th century BC. Capital was Merot, now in Sudan. Iron work broduced tools to much of eastern Africa. Most prosperous 300 BC to 300 AD. Concored by rulers of Axum from highlands of Ethiopia. Axum was traders and merchants.

Ancient Ghana was presint day Mali near the headwater of the Senegal and Niger river. Flourished from 700 to 1200. Ghana controlled traid roughts from West Africa to North Africa. Ghana was eventually destroyed by invaders around 1200. Started slave traid. 1300 Mali most powerful empire in West Africa. Held on because controlled caravan roughts. Timbuktu, one of Mali's great cities. Traided salt and gold.

Songhai, West African civilization. Capital was Gao, was on Niger River east of Timbuktu. Defeated Mali in #s of wars. By 1400, Songhai empire extended beyond Mali territories.

Student 2

What is known about sub-Saharan Africa before European exploration?

the kingdom of Kush. (iron)Axum, Ethiopia.

Ghana (Mali), senegal and niger rivers.

started the slave trade and traded Gold.

Ghana destroyed around 1200, soon after 1300 turned to Mali.

Songhai - capital Gao - Stanley explored on the Congo R. Dr. Livingston - Eastern Africa

conference of Berlin 1884-1885

Ashanti - democratic, modern day Ghana Tribe. matrilineal abusua - female side of family, have a constitution and a court of law. made money in trading, but are subsistance farmers. Drink wine and beer. The men pay bride wealth for the brides. marry at 13. If you want to marry again, mail has too agree, also same with divorce.

Student 3

I. Early African Civilization

1. *What history is known about sub-Saharah before european exploration?*
   Greek - 5th cen. BC
   Controled Nile R Valley
2. *What were some famous empires?*
   Ghana in Mali - 700 to 1200
   Timbuktu in Mali - city
   Songhai in Gao
3. *Why do some sub-Saharan countries prefer one party governments?*
   Because they can move more quickly to achieve national goals.
4. *When did the countries start to become independent? 1956*
5. *When was Ghana destroyed? 1200*
6. *What are some problems faced by sub-Sahara?*
   1. *Building a nation with the often illogical colonial boundaries.*

REFLECTIONS

As I was doing this project, I developed some questions concerning the background of my students. Why did some students have such a hard time with something so easy as writing the main idea of a section? I always felt this should be well learned by the time they are in high school, but now I have proof that it isn't always learned by this time. The same is true for questioning. I have to teach how to write and answer questions at different cognitive levels.

I have decided to try this again next year, but will start it at the beginning of the school year. I felt I needed to spend more time on the introduction of the method. I can also see a connection between this and having them taking notes correctly in class. My class time is so precious, I sometimes feel that it is wrong to take time away from the curriculum. After this experience, I feel that teaching reading skills is just as important as teaching the gross national product of Brazil. With the emphasis in reading across the curriculum, I hope more teachers will stop and take the time to teach, or review, needed reading skills in class. This can only result in better educated students.

ETHNOGRAPHIC STUDY

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Using Computers with High and Low Readers

THE SITUATION

The students I selected to be in the research study are all seventh grade students who are presently taking the seventh grade, mandatory, computer literacy course. There are six students total, three of whom are boys and three of whom are girls. The high group consists of two boys and one girl. The low group consists of two girls and one boy.

The average reading levels are: high group - 9.6 grade; low group - 4.0 grade. I felt that these groups would be different enough in reading to act differently while learning on the computer.

It has been proven that computers can aid learning in the classroom. But can using the computer actually improve the reading level of BOTH high and low readers without any additional instruction on reading skills?

When I decided to try to find out how the students' reading levels differed while on the computers, I decided to do an ethnographic study. I would pretest the students, observe their behavior, and ask them questions about how they felt about reading and working with the computers. I would maintain notes of their responses throughout the semester.

To find the students I would use in the research, I asked for volunteers in my computer literacy classes. All who volunteered I pretested with an easy-to-use word recognition test (San Diego Quick Assessment Test) which tested up to the tenth grade reading level. Of those students who I tested, I chose six who I would observe. Three high level readers and three low level readers.

To understand what kinds of techniques the students use to read, I administered a reading behavior checklist (Appendix A). On this check list the students circled as many behavioral sentences as were applicable to their own reading behavior. Also, on the first day I asked each student nine questions about reading and the computers. The questions are as follows:

1. How do you read the directions? Show me.
2. Does the computer help you to read?
3. How?
4. What happens when you write on the computer?
5. How do you feel about writing and reading on the computer?

6. How do you feel about following directions while using the computer?

7. Why?

8. Do you do better or worse, in reading and writing, while using the computer?

9. Tell me how you feel about the computer in general.

The reason behind these questions was to determine what they would say about the computer, and how they felt about reading while using the computer (Appendix C).

WHAT I DID IN STEP-BY-STEP SEQUENCE

To start the research, I administered the pretest to determine who my subjects would be. It turned out that I had one girl in my third hour class who was a high performer in reading. She tested on the ninth grade level. The other five students were in my more "challenging" fourth period class. The other two high readers both had a tenth grade reading level. The three low level reading students were at third, fourth, and fifth grade reading levels.

After choosing the six students, I administered the reading checklist and the oral reading questions. After doing this, I started to write down their behavior. I noted their finger technique in typing, their attitudes in class, how well they used higher level thinking process that it takes to program, and how well they did in group work, flowcharting, and trying new software packages.

When I started this research we were on our last week of learning keyboarding techniques. Their assignment was to type a one page, single-spaced letter. It could be to anyone, about anything. The first behavior I noticed was the difference between the high readers and low readers in getting organized, choosing someone to write to, and getting started. The high readers seemed excited about getting started; the low readers had to think of someone to write to and then try to come up with something to write. They had three days to accomplish this and two of the low readers didn't know what they were going to write about until the second and third day. One student became extremely frustrated and started to cry on the second day of the assignment. He couldn't decide who to write to. The letters are eye-opening (Appendix D). A student who pretested at the third grade reading level, has extremely poor sentence structure. Every sentence starts with the person's name to whom she is writing. The student who cried wrote a letter only nine lines long, due to getting started on the day the assignment was due. His spelling is poor, but he seems to understand how to structure sentences. A third student misspells quite a few words, but she makes correct paragraphs and sentences. Her typing skills are excellent, due to having been taught keyboarding in sixth grade.

The three upper level students finished their letters. All had good sentence and paragraph structure and good spelling.

We had a test over the computer skills that they had been using during the four weeks that we were working on keyboarding skills. By their test scores, I could see who had really understood what they were doing and who didn't. There was nothing on this test that they didn't have to know to run the program that we had used for the entire four weeks. Out of 25, the high readers scored 23.6. The low readers scored 19.1. **The scores indicate low achievers in reading were becoming low achievers in computer use too.**

Our next unit was programming which requires application level thinking capabilities. It is very analytical in nature and is usually very hard for ANY seventh grader to grasp the concept.

Both high and low readers were frustrated at first, but after week one the upper level students had the basic concept down pat and were doing well. I heard a lot of comments from low group students about how "boring" or "stupid" programming was. These comments and their worsening behavior told me they were frustrated and therefore just did not want to try. By the end of the second week the whole class had started following the low group's lead and said they were bored. This was the only class in which I heard any negative comments. The other two classes seemed eager and willing to learn. In fourth hour we then quit programming and studied a chapter on programming out of the book. The book is above a seventh grade reading level and the highest score out of a possible 30 on the test was 20. In hindsight I see I shouldn't have required reading as a way of learning. The low group can't learn by reading.

Within groups it was strange to note that when they chose their own groups of three they didn't choose people who had comparable knowledge. I believe this was more on a basis of friendship than anything. There was no consistency in who took charge in the groups.

HIGH READERS

Student 1 - shared responsibilities
Student 2 - took charge, ran the group
Student 3 - follower, shared group responsibilities

LOW READERS

Student 4 - led the group, non-productive
Student 5 - in a group of two, did most of the work
Student 6 - follower, shared group responsibilities

It was interesting to note that all of the groups had some form of reading in their programming presentations and the low readers ALWAYS read the definitions out of the book. Of the high readers, only one did. The other two wrote notes on cards to guide their speaking.

The next observation was during flowcharting. This is when symbols and few words are used to chart a program or steps to do something. Scores for the flowchart test, out of a possible 25, were: high group averaged 23, low group averaged 21.

This is interesting: When there is very little reading involved, the low reader does as well as the high reader. Student 6 is the only one who is consistently behind in her thinking processes. At this point I gave another questionnaire to find out their perceptions of the computer, but this time I let them fill it out themselves instead of orally. I thought I might get more complete answers, but this did not occur (Appendix F).

The classes now started the application portion of the course. After being off of the computers for a couple of weeks the kids were excited about getting back on them. The first thing they did was "Crossword Magic," which lets the user invent crossword puzzles. They had to do two puzzles which were graded on spelling errors and completeness of assignment. Student 4 needed extra time to complete hers so she came in in the morning to finish. The average score, out of 30, for the high group was 24. Average score for the low group was 29. Amazingly, the lowest score was Student 2. He forgot to come in early two days in a row to print his second puzzle. His score lowered the high group's scores quite a bit.

The next program was a data base program called "Friendly Flier." It is menu-driven and utilizes many prompts at the bottom of the screen. **The low readers would fail to look at**

the bottom of the screen and get confused. They either didn't see the prompts or wouldn't read them. I also noticed that the lower students are afraid to do anything before asking what to do. The higher students experiment and try to do the assignment on their own.

As a post-test, I administered the same word-recognition test as in the pretest, but I put the words into sentences. I wanted to determine if they had improved over the last eight weeks through other classes or on their own (Appendix G). I then gave the same sentence word-recognition test four days later on the computer. I wanted to see if they had a change in reading levels from paper to computer (Appendix H).

CONCLUSIONS AND OBSERVATIONS

A. Organizational skills tend to be better in the higher reader.

B. The students' computer skills seem to be better with high reading skills.

C. There is a lower frustration level in the lower reading students.

D. Low readers tend to be less adventurous, more insecure, and less willing to try new techniques on their own.

E. The "bad" behavior comes from the lower level students more often than the upper level students.

F. Reading level has no bearing on a student's group role.

G. Low readers are less comfortable in front of a class during a presentation.

H. Both groups did equally well with a sequencing assignment (flowcharting), proving that thinking processes are not necessarily related to reading skills.

I. A laissez faire attitude is not restricted to low reading ability.

J. Seventh graders tend to care more about being with their friends than being in a group that would get them a good grade.

K. Seventh graders do only the minimum amount of work that is expected of them. They will not elaborate.

L. The differences in success between the high and low groups when tested on paper versus tested on computers is as follows:

HIGH GROUP

	Student 1	Student 2	Student 3
Pretest	10th	10th	9th
Paper	10th	10th	9th
Computer	10th	10th	10th

LOW GROUP

	Student 4	Student 5	Student 6
Pretest	4th	3rd	5th
Paper	4th	4th	7th
Computer	4th	4th	7th

Student 1 had the exact same success on the computer as on the paper test.

Student 2 missed a total of eight words on the paper test and only five on the computer.

Student 3 improved her level by one grade when using the computer. She missed a total of ten words on the paper test and only six on the computer.

Student 4 missed approximately the same words on the computer as she did on paper although there were three more words that she got correct on the computer than on paper.

Student 5 had no change. The words he missed were the same on both except for one or two words.

Student 6 is still at a fourth grade level. She changed only one or two words missed.

From this information I am concluding:

1. There is no significant change in success when testing a student on paper or on a computer screen.

2. Successful and unsuccessful mental processes used while reading are transferred to computer efforts.

3. Low ability readers do learn from computers, or at least increase their motivation initially (Student 5's results).

REFLECTIONS

I found that there were many things that I could research while not even trying to, such as organizational skills, learning behavior, and frustration levels. It wasn't just reading that I was researching, but the students' whole attitude and behavior.

At first I thought I wasn't researching right because I wasn't getting any differences. Then I realized that in itself may be a finding. Next time I would research for a longer time. Maybe changing these ingrained habits takes more practice?

There hasn't been much of a change in my teaching behavior because I aim my instruction at able and unable students now. I have increased my learning by reading assignments slightly and I teach them how to read the material instead of assuming they know how to read and will transfer the required abilities.

Appendix A

Reading Behaviors Checklist

Dr. Michael L. Tanner

Content Field passage is from: _____ Student's year in school _____

DIRECTIONS: Please read through this list of behaviors and circle the behaviors you actually used to read this passage. You may not be accustomed to thinking about how you read, so this list suggests behaviors you could have used. Feel free to ask for any ciarification you may need, or to add any behavior that is not listed. It is doubtful that any one reader would use all the behaviors listed.

Behaviors associated with how you read:

1. I say the difficult words out loud as I read.
2. I used my finger to deep my place as I read.
3. If I didn't know a word, I asked the tutor to pronounce it for me.
4. If I don't know a word, I think it helps to say it out loud or to myself.
5. If I didn't know a word, I tried to break it into parts to pronounce it.
6. If I didn't know a word, I tried to figure it out from the surrounding words or sentences.
7. If I didn't know a word, I skipped it.
8. If I came across an unfamiliar word, I guessed at it based on how it looked.
9. While reading, I remember looking at each word and not at phrases.
10. While reading, I remember looking at phrases, not just individual words.
11. I reread some parts of the selection.
12. I reviewed the material in my head as I read.
13. I looked at the questions about what I was reading as I read.
14. I looked at the questions at the end of the section, or chapter before I read.
15. I compared information I was reading to what I already know about this topic; it reminded me of something else.
16. I anticipated what was coming next in the selection as I read.

Reading Behaviors Checklist (Cont.)

17. I glanced over the whole passage first then went back to read it more slowly.

18. I used the bold face headings as I read.

19. I used the diagrams or pictures if they are included.

20. I always paid close attention to the beginning of the selection.

21. I always paid close attention to the end of the selection.

22. I tried to consciously remember what was said.

23. This reading reminded me of an experience I had.

24. This reading reminded me of similar material I saw on TV, or in a movie, or in a discussion I was in.

25. I imagined the activity or scene as I read.

26. I reacted to what I was reading.

27. I thought about how I would feel or act if I was involved in these actions.

28. I added material I already know to this selection.

If this type of reading were assigned as homework:

29. I would read this selection for enjoyment.

30. I would read this selection to cooperate and get it over with.

31. I would read this selection and think about it as I read.

32. I would try to remember details as I read.

33. I would read to understand the general idea.

34. I wouldn't read it.

35. I would start to read but probably not finish it.

36. I would read it and relate it to class activities.

37. I would take notes as I read.

Please circle whether your interest in this passage was: High Low

3rd gr

a	about	made	splash	grateful	admiration
can	came	keep	afraid	dangerous	geography
do	give	why	wrote	daughter	sausage
my	know	black	neighbor	wrinkled	scissors
no	make	these	blew	thieves	responsibility
see	them	maybe	cookie	disappear	persuade
this	one	road	ground	ceiling	character
will	us	our	voice	hurried	wilderness
not	too	don't	number	machine	century
you	went	friend	sure	impatient	commercial

legislature	cylinder	legitimate	indoctrinate	subversive	dehydration
variety	pursuit	proposition	celestial	contaminated	desirability
ridiculous	treacherous	disintegrate	lubricant	depreciate	corpuscle
celery	congratulations	functional	allegiance	immunization	ammeter
democracy	maneuver	heirloom	pessimistic	protozoa	therapeutic
qualify	dialect	secluded	perpendicular	ecological	philanthropy
affectionate	meteor	heredity	isthmus	instantaneous	deterioration
atmosphere	avalanche	enthusiastic	liquefy	nutrient	irrevocable
brilliance	diphtheria	ordinance	archaeology	preconception	tyrannize
contribution	exhaustion	invariable	vacuumed	feudalism	physiology

Reading Behaviors Checklist

Lori D. Dahl

Name of student Julie Date 9/28/88

DIRECTIONS: Please read through this list of behaviors and circle the behaviors YOU ACTUALLY USED to read this passage. You may not be accustomed to thinking about how you read, so this list suggests behaviors you COULD have used. Feel free to ask for any clarification you may need, or to add any behavior that is not listed. It is doubtful that any one reader would use all the behaviors listed.

Behaviors associated with HOW you read:

1. I say the difficult words out loud as I read.

2. I used my finger to keep my place as I read.

3. If I didn't know a word, I asked the teacher to pronounce it for me.

4. If I don't know a word, I think it helps to say it out loud or to myself.

5. If I didn't know a word, I tried to figure it out from the surrounding words or sentences.

6. If I didn't know a word, I tried to break it into parts to pronounce it.

7. If I didn't know a word, I skipped it.

8. If I came across an unfamilar word, I guessed at it based on how it looked.

9. I reread some parts of the selection.

10. I looked at the questions about what I was reading as I read.

11. I used any bold face headings in the assignment as I read the directions.

12. I used the diagrams or pictures in the assignment, to help with the directions.

13. I never read the directions.

14. I would start to read the directions, but probably not finish them.

15. Other comments:

READING QUESTIONS

NAME Connie DATE 9/28/88

1. How do you read the directions? Show me.
I start from beginning + READ them. When DOESN'T know A WORD - SOUNDS out OR SKIP it.

2. Does the computer help you read?
YEA

3. How?
She writes it + she knows what its SAYING so its EASIER to READ over.

4. What happens when you write on the computer? I like to type. Its funner.

5. How do you feel about writing and reading on the computer?
~~Its~~ EASIER. LETTERS ARE BIGGER + BRIGHTER.

6. How do you feel about following directions while using the computer? MORE. THERE'S MORE DIRECTIONS. DIRECTIONS ARE HARDER.

7. Why?

8. Do you do better or worse, in reading and writing, while using the computer?
~~BETTER~~.

9. Tell me how you feel about the computer in general.
I like it. Cuz its fun to type + write stories + stuff

1. How do you feel when you are on a computer? (excited, bored, interested...)

2. Why do you think you feel the way you do about computers?
I like because they are so advanced and can do so many different things.

3. How do you ACT when you are using a computer in the classroom? Do you think your behavior is better or worse? Why?
I don't want to help the people who don't understand but just go on by myself.

4. Do you feel you have any kind of handicap when you use the computer? For example, does your typing skills hinder you, or your reading capabilities, or your math skills?
I wish I could type faster or the computer loaded or something faster.

ETHNOGRAPHIC STUDY

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Mnemonics in the Biology Classroom

THE SITUATION

I became interested in mnemonics after reading a paperback titled *The Memory Book* by Harry Lorayne and Jerry Lucas. The book contained a number of different memory techniques the authors found useful in many situations. Since I teach biology, and since the introduction of new words and the memorization of those words is important, I tried some of the techniques on myself. Surprise!! They worked for me. I wondered, would these techniques work for a mixed classroom of nice kids who had widely varying interests in the topic I was teaching?

I began by introducing 10 nonsense words, one of the hardest things to memorize and retain. I did this as a part of the "Hi, how are you" first two days where the kids are still registering into the class and it's hard to stay on task. The words were:

Airplane
Trees
Envelope
Earring
Bucket
Singing
Basketball
Salami
Star
Nose

I used a technique called the link, which is a method of memorizing based on two simple facts: the mind tends to remember things in a sequence and it remembers exaggerated, very large items or large numbers of items better than something that is routine. Confused? When was the last time you saw an airplane? Were you impressed? Probably not. However, if the airplane was massive, and I mean really BIG . . . let's say it had 12 engines and the wings were so long the tips touched the runway and it could seat 5,000 people . . . you'd remember it! It doesn't exist, you say, which is true, but an amazing thing about the mind has just been verbalized. While you read the plane's description, your mind "saw" that plane, didn't it? Not only that, but the fact that the image was ridiculous made it easier to remember. What's the word we are talking about? You didn't have to go back to the text to remember "airplane," did you? And so the game goes. To remember the next word," trees," see thousands of trees growing on the wings of the plane. Outrageous, I know, but your mind can see it, can't it? It's important to see the trees growing on the plane, because it links the trees to the word "plane." Now see thousands of envelopes hanging from the trees, in fact the trees may have envelopes for leaves. Got it? Good. Now see the envelopes full of earrings, so full of earrings that the envelopes are bulging at the seams and getting ready to break, or you could see one massive 300 pound earring hanging from each envelope. Either will work. Now see the envelopes ripping and the earrings falling out into buckets which are singing.

The game goes on, but if you have been mentally "seeing" these pictures, you have memorized and will retain for several days, without much studying, the first six of the ten words. Try it. The first word was "airplane" and the next . . . you finish the list. OK, now forget them, except for once tomorrow. Think about them just once and you'll have them for weeks.

RESULTS

I tested my students, unannounced, one week later, and discovered 91 percent of the students from my Period 2 biology class knew all ten words in order. A subsequent test given three weeks later as an extra credit add-on showed an 82 percent retention.

Hmmmm, I thought. Could I use this technique to have students remember, say, the first 16 elements of the periodic table? I picked my Period 2 class, since it is my largest biology class, consisting of 30 students, 15 males and 15 females. The results are listed in Table 1 by roll book number .

Ouch. Results showed only 5 students improving their grade on the unannounced post-test while 14 had lower scores. Five of the males and eight of the females had lower scores on the post-test while seven of the males and five of the females stayed the same or improved on the post-test. Only 67 percent (17 out of 25 students who took both tests) still know 9 or more of the 16 elements 2 weeks later. **Not great . . . not what I had hoped for.**

I'll try again. This time I gave them classifications of algae:

Chloraphyta - the green algae
Phaeophyta - the brown algae
Rhodophyta - the red algae
Chrysophyta - the golden brown algae
Pyrrophyta - the dinoflagellates . . . usually a unicellar little guy

They knew the game rules now . . . I gave them an example . . . and they developed their own memory gimmick. (Appendix A shows some of the mnemonics they developed to memorize and retain the words.)

I gave them a quiz, unannounced, gave them another quiz ten days later. Results are listed by roll book number in Table 2.

CONCLUSIONS

Results showed 11 students improving their grade on the unannounced post-test while 5 had lower scores. Three of the males and 2 of the females had lower scores on the post-test while 12 of the males and 11 of the females stayed the same or improved on the post-test. Ten days later, 78.5 percent (22 out of 28) knew 5 of the 6 terms. If I compare the two tests, I get results which seem to indicate self-developed mnemonics are more memorable to students than are teacher-developed memory aids and there seems to be no significant difference in the way the males and females react to the use of mnemonics (Table 3).

An entertaining spin-off of this study for me was to hear students verbalizing how they were using the mnemonics in other classes, especially World Geography and History. Comments like the following were gratifying:

"I was the only one in the class who knew the events in order . . . and I'm not telling them how I did it!" Dale Olner

"I still remember the words from three days ago, after a weekend has gone, and I didn't even study them." Brian Carr

"I taught my little sister all the Presidents, in order, for her sixth grade class and it was actually kinda fun." Brandon Alexander

I believe mnemonics can be a useful tool for students in some situations if they will take the time to apply their imaginations and make memorizing a game instead of drudgery.

Table 1

Periodic Table Test Results

Roll #	Sex	Test A Number Correct	Test B Number Correct	Improvement + Memory Loss -
1	M	16	16	same score
2	F	11	7	-4
3	F	12	10	-2
4	M	0	7	+7
5	F	16	16	same score
6	M	14	14	same score
7	M	6	4	-2
8	M	6	2	-4
9	F	14	10	-4
10	F	0	4	+4
11	M	9	12	+3
12	dropped			
13	F	13	8	-5
14	F	11	14	+3
15	F	3	16	+13
16	F	absent	16	N/A-no Test A
17	M	11	16	+5
18	M	absent	10	N/A-no Test A
19	M	13	10	-3
20	dropped			
21	M	11	absent	N/A-no Test B
22	F	16	13	-3
23	M	16	16	same score
24	M	16	9	-7
25	F	absent	5	N/A-no Test A
26	M	absent	7	N/A-no Test A
27	F	11	7	-4
28	M	16	9	-7
29	F	12	2	-10
30	F	11	10	-1
31	F	15	15	same score
32	M	16	16	same score

Table 2

Algae Test Results

Roll #	Sex	Test A Number Correct	Test B Number Correct	Improvement + Memory Loss -
1	M	2	2	same score
2	F	6	1	-5
3	F	5	2	-3
4	M	5	5	same score
5	F	2	4	+2
6	M	6	6	same score
7	M	6	6	same score
8	M	2	5	+3
9	F	6	6	same score
10	F	absent	6	N/A-no Test A
11	M	6	4	-2
12	dropped			
13	F	2	6	+4
14	F	6	6	same score
15	F	6	6	same score
16	F	6	6	same score
17	M	6	1	-5
18	M	2	6	+4
19	M	4	6	+2
20	dropped			
21	M	6	6	same score
22	F	6	6	same score
23	M	2	5	+3
24	M	4	6	+2
25	F	6	6	same score
26	M	3	6	+3
27	F	absent	absent	N/A-no tests
28	M	6	5	-1
29	F	5	6	+1
30	F	2	5	+3
31	F	6	6	same score
32	M	3	5	+2

Table 3

Comparison of Test Results

Results	Periodic Table Test	Algae Test
# of students improving or maintaining their scores on the post-test	12 (7-M; 5-F)	23 (12-M; 11-F)
# of students with lower scores on the post-test	13 (5-M; 8-F)	5 (3-M; 2-F)
% of students retaining at least 60% of material for second test	68%	78.5%
# of students who took both tests	25	28

Memory Gimick

Chloro went to visit Phae when Rhodo drove up in his Chrysler with Pyrry and Euglean.

Chlorophyta - is green because chloroplasts are green.
Phaeophyta - is brown and Phae is an indian
Rhodophyta - is red because his car is red
Chrysophyta - is golden-brown because he is a golden retriever

2 green chloroplasts fighting when a brown girl named Fae & a red haired guy named Rody jump into the golden-brown chrysler that has fire power which makes the car move & the car gleams.

Chloro = means green fighting
Faye = Black lady
Rhodo = an Indian
Chryso = gold Brown
Pyrro = dinoflagellates
Eugle = euglenoids

Chloroplast are fighting
Faye, a black lady, Rhodo is Indian
They get in their burning, gleaming chrysler, and are flagged down by a dinosaur flagman

2 green chloros are fighting: Phae with her brown dress and Rhodo with his red cowboy boots, jump into the golden-brown chrystler with a lot of dino-power under the hood while listening to the gleeming euglenoids.

2 green chlorplasts are fighting
Phea with brown hair +
Rode with red hair
get in their golden-brow chrystirdes
with high power that varies in color +
a gleeming animal inside

These two people a mexican (Phaeophyta) + an INDIAN (Rhodophyta) are fighting for some money (chlorophytay) + a chrysler (chrysophyta) but a match is droped in the gas tank and it starts a fire and the 2 guys decide to be pyros + jump in (pyrrophyta) + the glean w/ happinuse (Euglenophyta

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ETHNOGRAPHIC STUDY

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Breaking the Cycle of Frustration

THE SITUATION

Andrew is an eleven-year-old sparkle-eyed charmer. He knows much about the world and paints elaborate verbal pictures with artistic flair. His stats? WISC-R scores: Verbal-127; Performance-114; Full Scale-123. As a second semester sixth grader, Woodcock Reading Mastery-Revised grade equivalents give the first hint of the problem: Word Attack-2.7; Word Identification-4.3. Informal Reading Inventories suggest his comprehension skill to be two years below grade level. The Selective Reminding Task revealed Andrew has outstanding non-verbal storage and retrieval ability, adequate verbal storage, abysmal verbal retrieval -- poorer than 98% of his peers. Andrew's spelling is awful; his reading rate terribly slow. He meets the criteria that identifies him as a dysphonetic dyslexic. He has average intelligence, adequate vision, hearing and opportunity to learn, but can't match sounds to symbols efficiently or effectively and reads more than two years below grade level. Andrew needs four to five hours for homework per evening, in contrast to his classmates who seem to spend one hour or less. His parents are distraught. Worse yet, Andrew is a perfectionist; he is very reluctant to commit to paper anything that isn't completely formulated in his mind. Not only that, if he can't spell what he images, he turns up the charm. He's an expert at talking his way out of a written assignment by showing eager interest, superior content knowledge, and a spectrum of stall tactics to rival any I had ever observed in my teaching career.

THE FRUSTRATION

Nonetheless, as the demands of school kept increasing, Andrew's frustration was on the rise. His skills with written language hardly budged. It was understandable. When he did write, what emerged looked childish, filled with spelling and grammar errors, and employed the simplest words within Andrew's repertoire. Andrew and I both knew that his product in no way measured up to all that he knew. As his teacher in the Cardinal Stritch College Reading/Learning Center it became my job to help Andrew to cope, and hopefully to conquer. I saw him for seventy minutes once per week. Within this setting, how could I encourage Andrew to take risks with the written word is such a way that substantial growth would occur?

EXPLORING THE "BREAK"

Spurred on by the National Assessment of Educational Progress report that the difference between a good reader and a poor reader might boil down to about ten minutes of reading per day, I wondered if ten minutes of writing per session would make any difference in Andrew's writing fluency, writing skills, his willingness to take risks.

I set up these simple guidelines. First, I would tap into Andrew's strengths, namely his eagerness to converse and share his knowledge. Thus, I decided that at the start of a session

instead of greeting each other and sharing the week's events with each other orally, we would do so in writing. Second, I wanted to shut down the rule system that typically shut Andrew down. I made it clear that spelling and grammar conventions were irrelevant to our written conversation. Finally, I changed the writing time to match Andrew's time to bring an idea to completion. I decided we would aim for about ten minutes, but I would draw my data from the time it took to complete one side of a wide-ruled sheet of loose-leaf paper.

A TASTE OF THE TASK

I'd like to share two partial samples of the kind of interaction that occurred on paper. The first is a segment from our first engagement; the second, the last. Note how bound Andrew was to my leads initially, then how his word choice expands, volume increases, use of invented spelling improves and how the quality of his interaction changes. I most enjoyed his initiation of questions to me which occurred first in the seventh of ten sessions.

Sample One (9/9/88):

L: So tell me about any books you read this summer.

A: (Attempted to tell me out loud.)

L: Write!

A: (Asked out loud: What do you want me to tell you about?)

L: Andrew, write: What do you want me to tell you about?

A: (Copying) What do you want me to tell you about?

L: Just titles. I want to get an idea of the kind of things you read.

A: You want only titles.

L: Titles and/or subjects -- topics like mysteries or science fiction. What kind of stuff did you read?

A: I read science fiction.

L: Do you remember which story you read?

A: The Box car children

L: I've only heard of that book Never read it myself. Should I?

A: Yes, it is a good story about sume childen.

L: What's the problem with the story?

A: Finding a loum to keep warm in anuther problem is one of them get sick.

L: I take it their parents are out of the picture?

A: The parents are deid.

Sample Two (12/15/88)

L: Who sang at Bayshore Mall?

A: 78 Kids from bayside song. the 7th and 8th graders got to stand in the tree we soud in front of the tree . . we sang about 15 songs. I think. after we went to Basyshore we went to micdonals ware we ate lunch the problem was there was anouther school there and it thouk awile to find a seet.

L: Bummer! I'll bet you were hungry!

A: Yes kind of but mom only gave me 2$ whch only aloud me to have 6 ciken minugets and a glase of, water. Lukly a kid brought 15$ and I daroud a daier and bought a strawbarry shake it was good.

L: Good! New topic. Did you finish "On My Honor?"

A: Yes I finished. It dident take me long ether.

L: Did you read anything that surprised you?

A: yes when he stoped a car the man look for a short peryid of time than gave up and sed get the police. and drove away.

L: Was that part in the movie?

A: Yes. It was about the same word to. Did you read sumething this week?

L: Lots. But only stuff for work.

THE NUMBERS

Numbers confirmed my intuitive feeling that this was working. I counted the number of words written, words per minute, and since this was a combined effort, I noted what percentage of the product was Andrew's work. I also watched for his willingness to use words longer than three syllables, hypothesizing that an increase here would indicate a greater willingness to risk. I also examined the samples qualitatively for other signs of development of conventional writing skills. The following results emerged:

Results	Words/Minute	Andrew's %age	3 Syllable Words
Sessions 1-6	20.5	44.7%	3.6
Sessions 7-10	18.9	72.2%	6.6

It seems fluency "kicked in." Although the writing rate stayed about the same through our experimental period, Andrew's production increased significantly. In addition, Andrew was much more willing to use longer words.

I also noted improvements in spelling and grammatical awareness. Significant to me was the fact that Andrew began to self-correct. The word "bought" appeared on five different weeks

in Andrew's writing. The first two times he wrote "bot," the third time "bout." On the fourth sample, he copied "bought" from one of my lines, but used it twice correctly later during that writing time spontaneously. Note that "brought" is spelled correctly during the last sample. In addition to several individual words that improved with usage, Andrew crossed out and self-corrected spelling twice as often in the second set of protocols as he did in the first. And, as he really got into this procedure, about the eighth week, after a lengthy description of a party he attended he wrote, "Sorry about the run-on." His awareness of written grammar rules is budding from the inside out.

REFLECTION/CELEBRATION

I am convinced that as little as ten to fifteen minutes of written conversation per week with the constraints of "corrections" removed can build risk-taking and bonding with the written word in a learning disabled student who experiences himself as a failure when it comes to putting pen to paper. Andrew, and other students since Andrew's and my experiment, write more and use more of their well-developed oral vocabulary. Improved spelling and grammatical awareness may be a bonus. I am delighted to report, as well, that Andrew's parents see a change in his attitude toward homework. He stalls less and discriminates more often between what he can do on his own and which tasks will require parental assistance. I suspect Andrew's emerging image of himself as a student who can write has contributed to this change.

DESCRIPTIVE STUDY

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Will Reading Aloud Increase Interest in Reading?

STATEMENT OF THE PROBLEM

It has been recognized that "while young children develop literacy within broadly predictable and recognizable patterns, the range of normal development is enormous and heavily dependent, not on age or general intelligence, but on the literacy experiences children encounter from infancy" (Park, 1986). In digesting these words and forming a plan for action, I asked myself: "Is it not my duty as a first grade teacher to give to my young students a broad literature menu? Shouldn't it be comprised not only of basals and short stories, but also of literature-type stories that can create a sense of drama, feelings of excitement, sadness, and happiness that can be as compelling and gripping as the action of television?" Recent literature proposes that "lack of exposure to good literature must eventually have an effect on reading which, after all, is an acquired skill" (Chadwick, 1982). I decided providing a literature menu was my role and I developed this study to examine the impact of my decision on students.

RESEARCH QUESTION

Will reading a "novel" aloud to my first graders increase their interest in reading enough so they will read more on their own? If it did, I felt I was making them more proficient readers (and writers) just by increasing their engagement in such activities.

POPULATION

The study took place in my first grade classroom of 24 children with a focus on 3 students from each of my 3 reading groups of "high," "average," and "low."

STEPS FOLLOWED

I prepared a questionnaire to examine reading behaviors and attitudes. The questions on the questionnaire were asked to nine students, as described above. However, the entire class was read to and participated in the activities. My objective was to read the novel *Charlotte's Web* to my students daily for 15 minutes after lunch. I usually read for about 15 minutes because my purpose was not to stay within a specified time length, but to stop reading at an exciting moment. I wanted to stay away from instant story gratification that seems to be the steady diet of first graders who read in basals and who spend many hours watching television. During this reading time after lunch, students were allowed to "just listen" or to draw. I commented that since the book had very few pictures, that it might be fun to be our own illustrators of the story. After that comment, all I had to do was provide the drawing paper; the illustrations came pouring in. As the students began to label their illustration with words and short sentences, I decided the time was ripe to provide a journal for each student as a supplemental project. Again, the students were never told that they

HAD to write in the journals; the journal and illustrations were optional activities that could be worked on during the reading time or free time. A box was kept in the room for the completed illustrations and the students kept their journals in their desks (Appendix B). At the conclusion of reading *Charlotte's Web* (about nine weeks), the nine students in my study were questioned again using the same questionnaire.

As I began page one of *Charlotte's Web*, I was not sure how many of the students even heard what I read. However, by the beginning of the second week, students would come in from lunch and ask, "Are we going to read *Charlotte's Web* today?" My first grade students were more than capable of following the plot from day to day and keeping all the characters in check. In fact, one of the high points of this research was on a Monday when my lowest student recapped the entire plot in detail from the week before. This was a learning disabled student who benefited greatly by this success in front of all of his peers.

In the early stages of the story, almost all of the children enjoyed drawing as they listened. After I introduced the journal, most of the students tried writing in it. In fact, many of them showed a great enthusiasm for the chance to write (Appendix C). There was much more interest than was shown in previous writing opportunities. However, it seemed that most of the writing and enthusiasm was occurring from the students in the "high" group. About one and a half weeks into the journal, I saw more writing occurring from ALL of my students. Although the journal was an offshoot from my original question, we as educators need to be flexible in meeting the needs of our students. Thus, as the children began to label the short "i" pig in their phonics pages "Wilburt," "Wilbor," "Wilbrt," etc. I knew it was time for them to have an opportunity to write. Besides, how does one separate the reading and writing processes?

Below are some sample journal entries from the nine students I interviewed.

Early Entry (student from the **high** reading group)

Charlotte's wed was beautiful. I love Charlotte's web. It is so beautiful and I love the wed.

A Later Entry (**same** student from the **high** reading group)

One nite Willbuer asckd Charlotte to tell him a store. Charlotte began her store onse opun a time my cusin got a fish in her web . . .

Early Entry (student from the **average** reading group)

My favrit Persun is willber But hess Not a Persun hess a pig. Willber is Radicol.

A Later Entry (**same** student from the **average** reading group)

Willber wants Charlott to com to the fair. Charlott sed I will go to the fair with you. You are mi frend Willber sed Charlott. To Be Cuntiud

Early Entry (student from the **low** reading group)

Ths store is kod Charlotte's web

A Later Entry (**same** student from the **low** reading group)

The[y] wint to the fer. Unkle he was so Big Wibr fanitd.

QUESTIONNAIRE RESULTS

A copy of the questionnaire is attached to this paper (Appendix A). In the interest of space, I have picked a sampling of the most relevant questions.

1. Do you like for people to read to you?

   All of the students said, "YES!"

2. Name any book you liked reading.

   Four of the nine students named *Charlotte's Web*.

3. What would you rather have: extra recess time or extra time to look at any book in the library?

First Administration	Later Administration
Four students were for more library time, five students were for more recess.	Six students preferred more library time, one student was undecided, two students preferred recess time.

4. What do you think about when someone reads to you? (Answers are numbered to correspond with each student.)

First Administration	Later Administration
1.) think about the story	1.) I think about the story
2.) my dad and mom	2.) about something in the book might really happen
3.) I just listen	3.) I think about the story and I think it is nice
4.) I think about what they are reading	4.) I think about what they are reading.
5.) I don't know--maybe ice cream I might get later	5.) I think about how good it feels
6.) think about my friends	6.) think about what they are reading
7.) about all different kinds of things	7.) I think it is good to be reading and learning
8.) I feel like I love you and want to give you a hug (This is from a student who said on the questionnaire that he liked to be read to, but he was never read to at home.)	8.) I want to say thank you
9.) about the story	9.) I think about the nice story and I think about going to sleep

CONCLUSIONS

Before I began this classroom research, I knew as everyone else seems to that reading aloud is an effective teaching method. But why don't we do it more often - and in first grade particularly? Why don't we use good literature more often? The journal samples indicate an increase in writing complexity in a very short time. The entries began as bits of thoughts; however, as the students were exposed to good literature, they were able to see how language works and how thoughts are developed. The students were able to use these techniques in their own journal writings. The questionnaires indicate students begin to pay more attention to comprehension through listening.

My main purpose for this classroom research was to measure attitudes towards reading and to change those attitudes to the better if need be. I believe most of the students are headed in the right direction as shown by the results of the second administration of the questionnaire. I think the results can be explained by the interplay between listening to complex language in an interesting story and being encouraged to respond by visualizing and/or writing. Sharing information as a class was probably an insightful activity too. This story represents literature that teachers should search out and use more often. It is interest-catching and cannot be comprehended fully just by looking at the pictures or without discussion and sharing activities.

This method of using literature and listening led to many unforseen activities during my study. The students became so interested in spiders, pigs, and farms that I saw the results in other activities. On phonic workbook pages, the pigs were often labelled "Wilbur." During an art activity with clay, students made pigs, goose eggs, spiders, and webs. I planned a trip to a farm about the third week of the study and students reacted strongly to the pigs. Comments like, "I don't think Wilbur is that big" and "Wilbur is like these baby pigs" were common. By the fifth week, I decided to create and teach a science unit on spiders. It lasted about six days, ten hours. We also began to discuss "friendship" about now. About the seventh week, I made this note in my research journal: "Not only are the kids enjoying this, but so am I! I can't believe the memory these kids have for detail. For example, the next day they could still remember all of the different foods in the pig trough."

As teachers, we need to view reading aloud as a serious strategy for teaching our students some basic skills. Reading aloud should be interwoven in our teaching methods and not just thrown in when we have a few spare minutes. To get the best results for our time, we should select with care those books we read to our students. Then, plan activities that allow for and encourage responding to the plot.

I have enjoyed doing this classroom research because I can now confidently read to my students 15 minutes daily and know that they are not only enjoying it, but also learning from it.

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Appendix A

NAME _____

1.) Do you like people to read to you? _____

2.) Does someone read to you at home? _____

Who? _____

3.) Do you wish this person would read to you more? _____

4.) Do you ever ask someone at home to read to you? _____

5.) Do you like to look at a book after someone has read it to you?

_____

6.) Name any book you liked reading. _____

7.) How much time do you spend watching T.V.? _____

8.) How much time do you spend reading/looking at books each day at home? _____

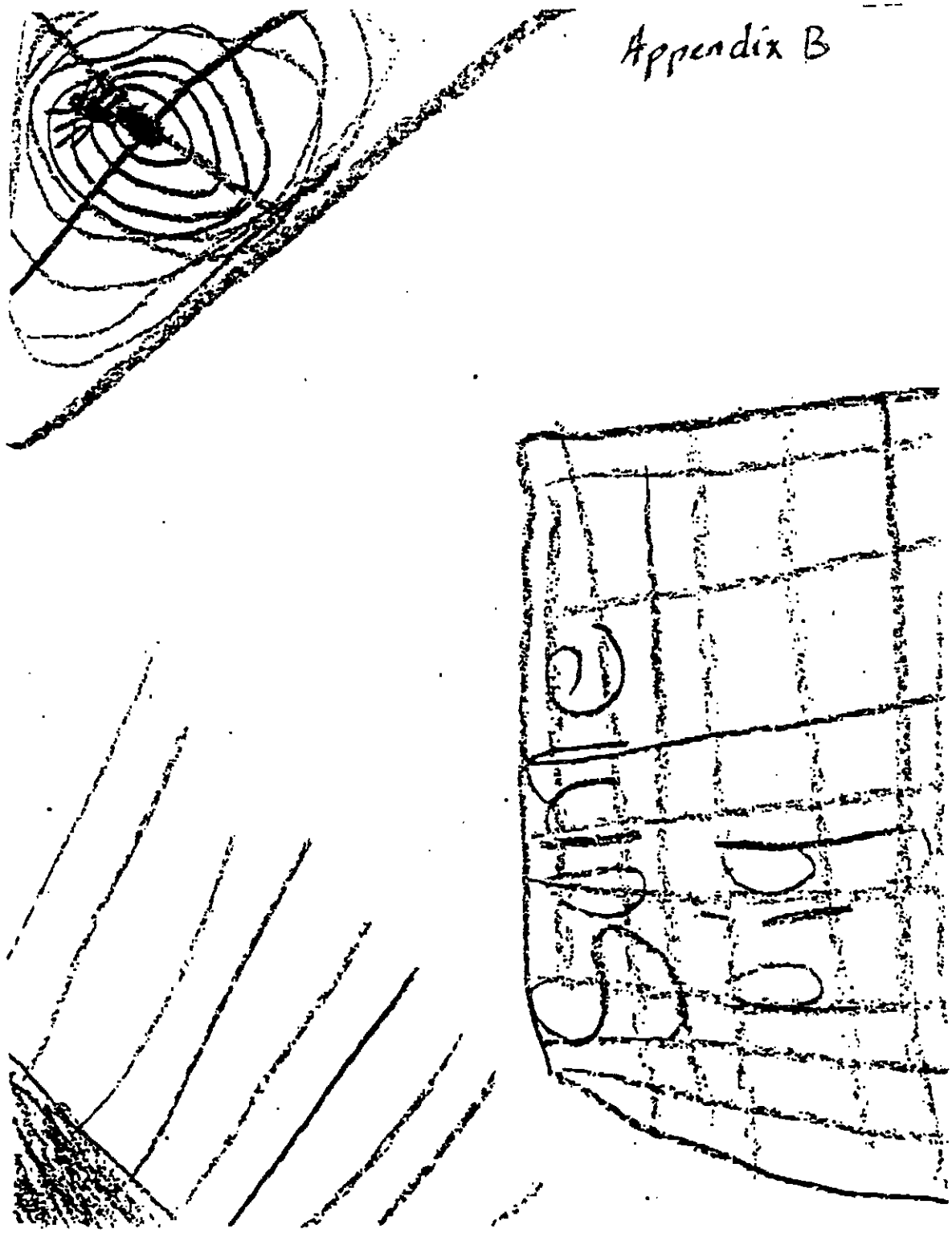
9.) What would you rather have: extra recess time or extra time to look at any book in the library? _____

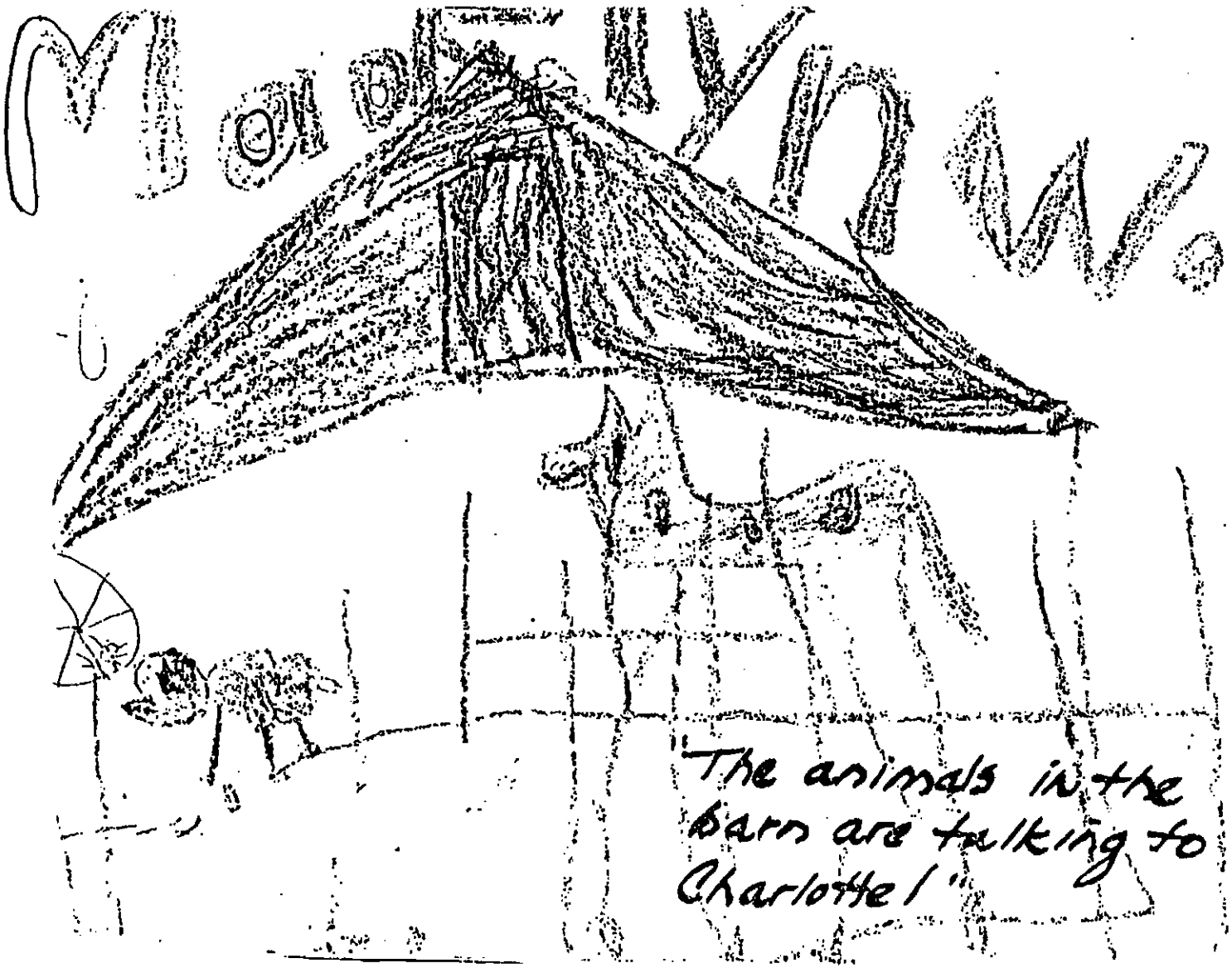
10.) Do you have a library card? _____

11.) What do you think about when someone reads to you?

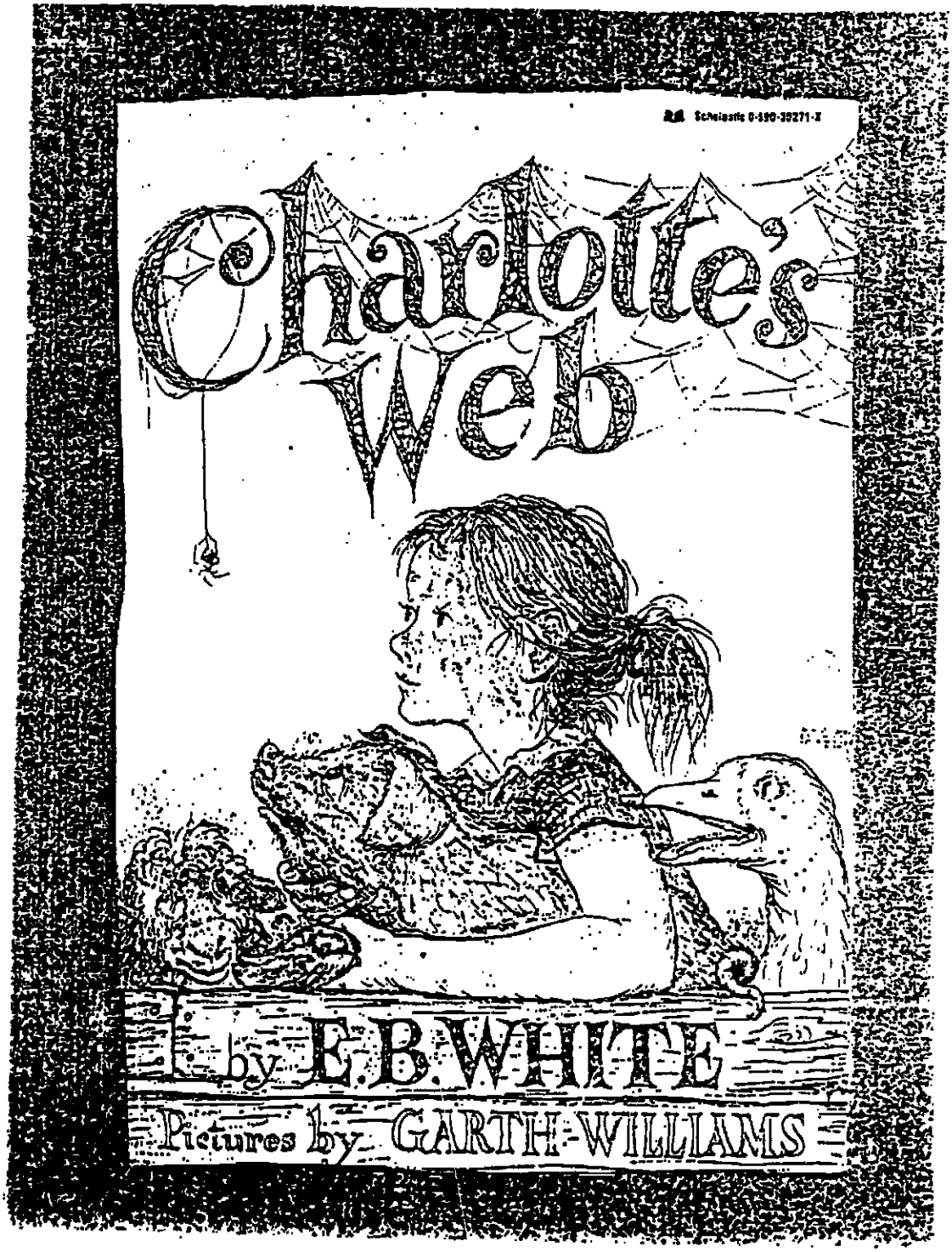
_____

Appendix B




"The animals in the barn are talking to Charlotte!"

Wilbur is a friendly pig!"


Charlotte's Web
by E.B.WHITE
Pictures by GARTH WILLIAMS

i lick the fair because it is fun I would like to go with Wilbur to the fair I would like to go on the ferriswheel because it is fun

My fravret prt is the.
prt vven the spidr pt
the fish and i lice wilbur
cos wilbur is mis and fren
wos wilbur fren wos willar
her father has to cil wilbr

The pig named Uncle he
was big very big
Wilbur thank he is going
to get first prize Wilbur
thank hes going to
Killed if Uncle gets firstprize.

DESCRIPTIVE STUDY

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Effects of a Buddy Reading/Writing Strategy on First Graders

STATEMENT OF THE PROBLEM

Fourteen first grade students are having difficulty mastering the basic sight vocabulary well enough to read the three Harcourt, Brace, Javonovich (HBJ) pre-primers. Morale is low among these students. Children are beginning to describe themselves as non-readers. Teachers have tried traditional approaches to building basic sight vocabulary, but as of February 14, 1989, progress is very slow. Students need to experience success in reading the pre-primers.

RESEARCH QUESTION

What effects will the buddy reading/writing strategy have on all participants?

POPULATION

The 14 struggling first graders were selected from two Waukesha public schools on the basis of their discomfort with the pre-primer. Ages of students ranged from six to eight years. Eight of these children receive Chapter I help on a daily basis. The other six students attend a school having no Chapter I program. All 14 students will receive special instruction from the reading specialist for two 30 minute periods each week over a two and one-half month period. This instruction will be done in the presence of the regular classroom teacher and aides who will continue to provide these students with the regular classroom instruction as well as follow up the reading specialist's instruction as appropriate.

STEPS OF THE STRATEGY

Having polled first grade teachers for their greatest current concern, 14 struggling pre-primer level students were identified as being unable to read the pre-primers with ease. These students' ability to read pre-primer sight vocabulary was tested and confirmed as being minimal. Upon interviewing students as well as teachers, it became clear that the self-concept of each student was ebbing. Students were describing themselves as non-readers and were being frustrated by the pre-primer. It was decided to employ the following strategy:

1. Temporarily remove these students from their source of frustration (HBJ pre-primers) and give them a heavy dose of success by using Big Books and multi-copies of the predictable Wright Sunshine Books.

2. Develop a reading fan club for these students by involving principal, school secretary, health room volunteer, older students, and parents by explaining philosophy, project, and need for these young children to read to a supportive audience. Arrange for first graders to take these

books around the school to read with pre-arranged support groups. Send letter home explaining philosophy of "Home Readers" after the books have been selected in class.

3. Carefully select older students to become buddies of first graders and explain to them the philosophy behind project.

4. Lead sixth grade students in authoring, illustrating, and coaching of reading the personalized pre-primers.

-- Sixth graders interview first graders to get to know their interests.

-- Sixth graders become supportive audiences of Home Readers.

-- Each of the carefully selected sixth graders writes a book especially for their "little buddy." These little books concentrate on the vocabulary of the pre-primers.

-- Little books are illustrated by authors while working with "little buddies."

-- Sixth graders coach little buddies in reading the personalized pre-primers.

Students were tested for knowledge of pre-primer vocabulary. Most of them knew very few of the words. Knowledge of HBJ pre-primer vocabulary is necessary in order to read the pre-primers with ease. It was observed that reading HBJ pre-primers was a frustrating experience for these children. Children were temporarily removed from the HBJ pre-primers. Highly predictable Instant Readers were introduced to the children. Over a four week period, students were introduced to eight different Sunshine Books (from the Wright Group). Each one contained highly predictable print. Through prediction and repeated readings, students could read a new book by the end of each class period. These books were taken around the school and home to be read to carefully selected audiences. The applause and other forms of praise encouraged the young readers.

Each first grader was then introduced to a carefully selected sixth grader. These sixth graders listened to the "little buddies" reading on a regular basis. They interviewed the "little buddy" to get to know the child's interests. Each sixth grader was then given the vocabulary list used in the three HBJ pre-primers and wrote a personalized pre-primer for their little buddy: a story about the first grade buddy, but using only pre-primer vocabulary words. Upon completion, first graders were called in to hear the story and suggest appropriate illustrations. This joint illustration process took two weeks and required repeated reading to and by the first graders. When illustrations were finished, an author-illustrator party took place, during which first graders read their own and another first grader's book to the sixth grade "big buddies." Naturally, refreshments were part of this party. (Cupcakes and soda were served.) Other members of this supportive audience included the teachers of the sixth and first grade students and the principal, as well as the school librarian. Copies of the books went home with the sixth and first grade students. A write-up was displayed in the school showcase and the library along with photographs of the event and the actual books which had been written. Children were then post-tested for attitude toward reading as well as knowledge of pre-primer sight vocabulary words.

RESULTS

I believe that the buddy-writing strategy benefitted these emergent readers as well as the older students. The emergent readers became more proficient, enthusiastic readers whose basic sight vocabulary improved on an average of 43 percentage points between the pre- and post-

tests. (From an average test score of 42% to an average test score of 85% of basic sight words known.) Repeated practice in reading the basic sight vocabulary is paying off in the transfer of learning as demonstrated in the reading of other materials written at this pre-primer level. Experience with the predictable instant readers seems to have assured many of these young readers that there are many reader-friendly books out there.

This project provided opportunities for parental education and involvement as well as development in the community of readers.

-- The note which was sent home to explain the philosophy behind the "home Readers" generated phone calls and opportunities to discuss the need for reading to and with a young child.

-- The questionnaire requesting permission to participate as well as an opinion of student and parent about the project evoked letters, calls, and conferences from parents of students in grades one and six, all expressing much home support.

-- A parent typist helped sixth graders take books to final copy. Sixth graders grew by giving of themselves to very receptive, eager, and appreciative younger students.

I am very much interested in using this strategy again. Other staff members have noticed the potential benefits that this project could hold for their students and have begun to discuss possible adaptations of the buddy-writing strategy. The older special education students might become the "big buddy" of the emergent reader. Adaptations could be made for the special education student whose writing skills are weak. For example, the interest interview could be facilitated with a tape recorder rather than taxing/challenging the special student's writing skills. This particular student might also dictate his/her own story into a tape recorder. A teacher or parent could transcribe and type the book.

HOW THIS STRATEGY IMPROVED TEACHING AND LEARNING

Student learning of basic pre-primer sight vocabulary improved on an average of 43 percentage points. Enthusiasm for reading improved as is evidenced by library usage and the number of books which children are now taking home. Evidence of parental involvement in children's reading and writing was shown in the many positive responses to the Home Readers, conversations with parents during spring conferences, as well as the positive written comments received after the personalized pre-primers were taken home. An appreciation for cooperation in learning across grade levels was demonstrated by positive oral and body language exhibited by all students involved in the project. The buddy-writing strategy improved teaching by giving a single focus to a many-faceted project.

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DESCRIPTIVE STUDY

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What Effects Does *Math Their Way* Have on First Graders?

STATEMENT OF THE PROBLEM

A current problem in schools across the country is that students do not like mathematics because they don't develop an understanding of the concepts. Traditional math textbooks teach things in an abstract way, without the use of manipulatives, which is hard for children to understand. I asked myself, "Isn't there a better way of teaching math so that children understand what they are doing and enjoy it?" I decided to set up a study using a *Math Their Way* format and keep a journal of my observations and feelings towards student growth during a period of 12 weeks.

RESEARCH QUESTION

Will the use of the *Math Their Way* manipulatives cause students to grasp math concepts better and therefore enjoy learning those concepts?

POPULATION

There are three first grade classes in our school of 507 students. I teach a heterogeneous group of 10 girls and 12 boys in my first grade section.

STEPS FOLLOWED

A. First I examined the scope and sequence for the Silver Burdette basal textbook. Then I examined the match-up of the *Math Their Way* concepts to the silver Burdette concepts. I looked at previous ITBS scores and found that one area that firs graders were weak in was story problems.

B. I did an individual math assessment on each student to see where they were in the following areas:

order of numbers by: 1's, 2's, 5's, 10's
1:1 correspondence
instant recognition
conservation or invariance of number
counting backwards
estimating numbers
numeral recognition
correct numeral forms

C. I set up a math station in the room with as many kinds of manipulatives as I could find. Many are contained in small boxes ("Treasure Boxes" as we call them; you might call them "Junk Boxes").

TREATMENT ACTIVITIES

I set up two math periods a day. I used a 15 minute block of time very first thing in the morning for an auditory approach to math. Then I used a block of 45 minutes in the afternoon for other activities using manipulatives.

15 minute block each morning for:

put up number of day of school on numberline
count by 1's, 2's, 5's, 10's using the numberline
put up the day of the week on the calendar
pattern and predict using the calendar
record today, yesterday, and tomorrow dates
tally number of days attended in month
graph weather
count money in the bank
work with hours and half hours on the clock

45 minute block each afternoon for:

patterning
comparing
number concepts (addition and subtraction)
sort and classify
graphing
predicting
story problems
tubbing stations

I tried to set up two periods each week to work with the whole group on language development for problem solving using manipulatives.

RESULTS

In September, children had trouble categorizing materials into two groups. Now they can find as many as 20 ways to categorize the same material.

Students' writing of numerals originally contained many reversals and improper formations. These have lessened but not disappeared entirely yet. I can see a big decrease in the number of students in which this occurs.

In the beginning of the year, most students could only count rotely by ones. Now all students can count by ones and have some meaning for the numbers. Most students can count by fives and tens; two students are still having trouble with this but they are new. We are beginning to work on counting by twos.

All students can use the calendar for reading the date and skip counting. Nearly all can do the patterning and predict what will come next or in a week.

At the beginning of the year, I modeled the stories for story problems. Now the students tell the stories, choose the operation needed, and record what they have done.

As students use the manipulatives, I hear such comments as:

"Hey, this is neat!"
"Look at what I made."
"This is fun."
"I really like this."
"I want to use those today."

CONCLUSIONS

In conducting this research, I have proven to myself that there is a better way of teaching math than just pulling out the sheets from the math textbook with its abstract numbers on each page day after day. The children are motivated and enthusiastic about working with the manipulatives. When given a choice they always choose the manipulative way of working the problems.

Student attitudes toward math are much better and regardless of what their math level is, they feel good about the outcome of their work. They like what they are doing.

I feel that the individual assessment helps me keep track of their achievement level and even while working the children feel like we are playing a game. One of the biggest compliments that one of the students paid the method was, "We don't do math, we just play games."

By conducting this research study, I feel that my teaching methods have been improved by watching children, gathering data, and then making appropriate changes. The children have had fun while learning concepts and are retaining the information. The children are further along in building concepts than with traditional math textbooks I have taught and they have a better understanding of what they are doing. Most of all, students like math as judged by their comments during math time in class.

Appendix A

SURVEY

What do you like most about math?

Student	1	It's fun when we write.
	2	I like counting using the numberline.
	3	Writing the numerals.
	4	Counting and pattern blocks.
	5	Writing on the white boards.
	6	Writing the numerals with clay.
	7	I like writing the numbers.
	8	Story problems.
	9	Story problems.
	10	Writing the numbers in salt.
	11	Writing the numbers on backs.
	12	Writing the numerals.
	13	Counting.
	14	Writing the numerals with clay.
	15	Writing numerals.

Which activities do you like best?

2	Circling bigger or smaller.
9	Numerals.
4	Numberline.
7	Writing numerals.
12	Calendar.
16	Going to stations.

What do you like about math?

What do you not like about math?

Which would you prefer using: unifix cubes or worksheets?

21 - unifix cubes

Would you prefer to count real money or pictures of money?

21 - real money

Would you pick paper and pencil worksheets or pattern blocks?

20 - patternblocks
1 - worksheets

Would you rather sit in your seat and work problems or go to tubbing stations and use the materials?

21 - go to stations
1 - just work problems

When you pattern, is it easier to have the materials in your hands or just write the way?

22 - materials in hands

DESCRIPTIVE STUDY

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Will Reading Aloud and Story Mapping Improve Students' Writing?

STATEMENT OF PROBLEM

A current theme in elementary education is the reading-writing relationship and its use across the curriculum. Recent research indicates that the use of children's literature provides children with examples of good writing, as well as stimulates their own thought processes for writing. As a Chapter I teacher at the elementary level, I decided to incorporate children's literature with writing. Having worked in the Chapter I classroom for a number of years, I have noticed that my students have a difficult time with written communication skills, particularly when asked to write a story.

RESEARCH QUESTION

Will reading a piece of children's literature to Chapter I students and the use of story mapping help to improve and stimulate their story writing ability?

POPULATION

My Chapter I program is in two suburban schools of approximately 300 students each. I teach second through sixth graders in written language and math for approximately 40 minutes two to three days a week. For the purpose of this study, I focused on the fifth and sixth grade language students in both buildings. This included 6 fifth grade boys and 4 sixth grade girls.

PROCEDURE

Having accepted the fact that most of my students disliked writing and often times avoided it, I decided to try a new reading and writing technique. What resulted was a 16 session story writing experience that proved to be both motivating and beneficial to the participants involved. Each subject took part in the three phase approach.

Phase I involved taking two preassessment measures. First, each student was asked to complete a Writing Interest Inventory which included a section of multiple choice responses, short answers, and fill-in-the-blank questions. Most of the statements on the inventory assessed the student's feelings about writing and the reading-writing relationship. The subjects were

instructed to take their time and to be honest with their answers. Second, the subjects were asked to write about anything they wanted to, as long as it was a story. These stories were later analyzed for the number of story elements they contained.

Phase II involved learning the story writing strategy itself, and I kept a daily log of activities and student reactions. The following procedure also took place in order to allow for adequate discussion and writing time:

1. Pre-Reading and Writing Activities

   -- The title illustrations and book jacket of each children's literature book were examined.

   -- Background knowledge was developed by retrieving relevant information and experiences.

   -- The subject and story content of each book were considered and predictions were formulated.

2. Planning

   -- Each book was orally read to the students in order to model appropriate reading techniques.

   -- The theme or pattern in each literary piece was used as a model for what the children wrote.

   -- Direct instruction and modeling of story mapping took place after each book was read.

3. Writing

   -- Each student received five 4 x 6 notecards, one for each story grammar component (characters, setting, problem, event, solution).

   -- The students used these cards to plan out their own stories based on the reading they had just heard.

   -- After formulating their ideas on the cards, the subjects manipulated the cards in order to organize their own stories.

   -- Each student then wrote their own story based on the literature book just read. Writings were analyzed on content and story grammar components only. No editing or mechanical errors were considered.

The literature books included in this study were:

Barrett, J. (1978). Cloudy With a Chance of Meatballs. New York: Macmillan.

Blume, J. (1974). The Pain and the Great One. New York: Bradbury Press, Inc.

Cohen, B. (1982). Gooseberries to Oranges. New York: Lothrop, Lee and Shephard Books.

Cosgrove, S. (1977). Leo the Lop. Menkato, MN: Creative Education, Inc.

Silverstein, S. (1964). The Giving Tree. New York: Harper and Row.

Wood, A. (1985). King Bidgood's in the Bathtub. New York: Harcourt Brace.

Phase III of the study was administering two post assessment measures. The same Writing Interest Inventory was given as used in the preassessment measure, the only difference being that several questions had been added. These questions asked about whether the literature books made writing easier and did the story grammar cards assist in the planning of story ideas. The students were also asked to rank their favorite literature-writing experience from the most favorite to the least favorite. After completing the inventory, students were asked once again to write a story. No literature books or cards were used in this phase of the study.

RESULTS

I am convinced this literature-based writing activity with story elements benefited the Chapter I students involved. The results indicate both quantifiable and qualitative observable growth in most students. The students became more proficient, enthusiastic writers whose organization and quality of stories improved.

During the preassessment story, only 50% of the writings included the five story grammar elements. Most of these stories, however, were poorly organized and of very poor quality. The other 50% of the stories contained only one or two of the story grammar elements and were also disconnected. After strategy instruction and postassessment, these findings change. Every postassessment story from all ten subjects contained the five story elements. These writings were also organized into paragraphs with improved quality content.

Upon analyzing the two (pre- and post-) Writing Interest Inventories, more conclusive results occur. When comparing change in responses, 23% indicate positive changes for the reading-writing relationship, while 15% contained negative response changes. All other responses remained the same. Half the subjects agreed that writing helps to improve their reading, and that reading a story first gives them an idea or helps them to write better. Eighty percent agreed that both the books and cards made writing stories easier.

I believe that these results occurred for several reasons. First, surprisingly enough, most of the students were unfamiliar with story mapping. The strategy offered them a blueprint for writing and helped them to get started. Most of my loggings indicated difficulty in this area during the initial stages of the study. Second, the literature books provided the students with a theme and the additional motivations needed to write a story on their own.

CONCLUSIONS

By conducting this research, I was able to begin to resolve one problem existing for low achieving students. I was able to offer them, as well as test, a literature-based strategy to improve their writing. As of now, I plan to use the strategy again using a more varied approach to the writings and including more literature books. This technique offered my students a chance to build their vocabularies, extend their schemas, offer them pride of ownership, and a positive writing experience. The findings of the study showed almost immediate results and indicate the importance of offering students a metacognitive approach to learning. It also points out the

existence of the reading and writing relationship. Integrating both into a curriculum can only lead to a positive learning experience.

HOW THIS STRATEGY IMPROVED TEACHING AND LEARNING

It has been my intention to encourage a sense of enthusiasm and excitement in Chapter I students for both reading and writing. I have attempted, through the use of this strategy, to expose them to ideas, experiences, concepts, and thinking skills, which are not always presented within their individual classrooms. Hopefully, I have been able to stir their imaginations, activate their minds, and enhance their skills into an interesting and enjoyable learning experience through the use of literary genre. As such, this strategy is just the beginning of the development of a love for language and a joy for reading and writing!

DESCRIPTIVE STUDY

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Examining the Difference Between Student Reading Strategies In Basals and Tradebooks

STATEMENT OF THE QUESTION RESEARCHED

Since I began teaching first grade reading, I have used a basal reading series as a primary source of materials. The first basal stories have only a few words, and these words are repeated over and over. The new vocabulary words are introduced before every story and the students' reading level gradually increased. The children's tradebook selections that are used in most basals have been condensed to fit a controlled vocabulary. This controlled vocabulary has been comfortable for both my beginning readers and me. Sometimes I "spice up" my reading program by providing children's tradebooks at a reading level comparable to their basals. When I do this, I've noticed the students have a difficult time reading the tradebooks. They sound out every word, read in a very labored fashion, and do not draw context clues from the pictures or text. Has the predominant use of basals and basal adaptations caused my students to become "locked" into the limited vocabulary of the basal series? Has this affected the way my students read materials other than a basal? These questions prompted me to observe the differences in children's reading of tradebooks and basal adaptations.

POPULATION

Eight second grade students (six girls and two boys) of above average reading ability, determined by district and ITBS reading scores, were the subjects of this study. All of these students were non-readers when they entered my first grade classroom. The students were taught to read using a basal program as the basis of instruction. This program was occasionally supplemented with library books and children's literature stories.

SPECIFIC PROCEDURAL STEPS FOLLOWED

Each child was asked to read two basal adaptation selections and two original tradebook selections of the same title. When selecting titles, I took great pains to find basal adaptations and tradebooks that were comparable in length and appropriate for beginning second graders. At each reading session, the following procedure was used:

A. Each child read a basal adaptation and a tradebook aloud to me. (The students did not experience any pre-reading activities or vocabulary exercises before reading aloud.)

B. The reading was taped, and I later recorded and analyzed the miscues using Goodman and Burke's *Reading and Miscue Inventory*. (Miscues are deviations from print made by the student while trying to make sense of the text.)

C. Each child retold the story in his own words and responded to questions about the story. I later analyzed the retelling by awarding the reader points for mentioning specific characters and events in the story.

DESCRIPTION OF DATA COLLECTED

Analysis of Miscues:	Same Students Reading: In Basal Stories		In Tradebooks	
Meaning Construction				
No loss	47 %		38 %	
Partial loss	24		21	
Loss	33		43	
Grammatical Relations				
Strength	59 %		46 %	
Partial Strength	6	72 %	13	66 %
Overcorrection	7		7	
Weakness	30		37	
Graphic Similarity				
High	39 %	76 %	33 %	75 %
Some	37		42	
None	29		30	
Sound Similarity				
High	16 %	54 %	16 %	58 %
Some	38		42	
None	47		44	
Retelling				
Characters	26	62 pts	26	60 pts
Events	36		34	

Some totals may exceed 100 % due to rounding-off.

Students had lower scores in tradebooks on the first two categories, meaning construction and grammatical relations. This indicated difficulty using meaning-based strategies to word attack. The graphic and sound similarity categories are similar. This indicated the same level of success using these systems to word attack. Similar retelling scores indicate that even though they had changed their success rate for using meaning-based word attack strategies, their short term retention was about the same.

CONCLUSIONS

A. There were only slight differences in the reading strategies used while reading in basal adaptations versus reading in tradebooks.

B. Readers in both groups used visual and sound strategies to decode words (as indicated by the high percentages in the graphic similarity and sound similarity categories: Basal, 76 percent and 54 percent; Tradebook, 75 percent and 58 percent). Therefore, the type of text didn't dictate any change in strategies.

C. The basal readers maintained grammatically acceptable sentences 72 percent of the time and the tradebook readers were lower with only 66 percent.

D. The categories of graphic and sound similarity were nearly identical. This indicated students used these decoding strategies with equal success in both sources.

E. Using tradebooks instead of basal stories won't hurt the readers' retelling scores nor will it hinder their phonic-based word attack strategies. I just have to teach and practice meaning-based word attack strategies more.

REFLECTIONS

I predicted that the tradebook readers would score higher than the basal adaptation readers in meaning construction, grammatical relations, and retelling. I believed that the rich language and illustrations found in the tradebooks would enable the students to make greater use of context clues to decode unknown words. The students would become involved in the story and identify with the characters; of course, their retellings would indicate that they understood the meaning of the story. I just knew that when compared to reading a tradebook, the innate simplicity of the basal adaptations would become monotonous to the readers and thus cause the basal adaptation group to score much lower in all areas. This did not happen! When trying to make sense of the outcome, I realized that my earlier hypothesis was true. My students had become "locked" into the predictable and controlled vocabulary found in basal readers. Their primary reading experiences had been using a basal reader; when asked to read a tradebook, they became perplexed and found it difficult. Students read the tradebooks the same way they read a basal adaptation and did not vary their reading strategies to allow for the author's contextual differences. The perfect illustration is a sentence from a reading of the tradebook, *The Wobbly Tooth*. A student read, "She tried juggling the tooth with her friends." Instead of "She tried jiggling the tooth with her finger." A student reading for meaning might have stopped and reread because the sentence didn't make appropriate sense. The student must have been concentrating on visual clues for word pronunciation and continued reading as if that was what it was supposed to be. This student is supposedly a very capable reader, yet he did not make fine distinctions between words that start or end with the same consonants. He seemed unable to expend the necessary mental energy to read the more challenging tradebook. I have to teach how to use the strengths of trade books to improve reading for meaning.

So, now for my next question: If the students read the adaptations and tradebooks in the same manner, then which would they remember the longest? Two months after the study, I asked the students individually to tell me anything they remembered about the book they read. The students had 24 percent greater recall in tradebooks. Surprisingly, all of the comments made by the tradebook readers were accurate while many of the responses made by the adaptation readers were ad-libbed or silly. Evidently, the tradebook must have had some effect on the readers for them to remember details of the story two months later.

This study helped me to see that I need to expose my students to many types of reading materials. I need to teach them to read for meaning. I need to emphasize that the rereading of sentences, predicting the semantical order of words, and utilizing picture clues are as important as recognizing the sounds of letters. Having as much experience reading tradebooks as basal stories will enable students to become familiar with different authors' styles and how to read each with success by concentrating or meaning. Most of all, I have realized that basals are not always better than tradebooks. Students will remember more, longer, with greater accuracy when reading tradebooks. Reading tradebooks can be just as effective for teaching reading word attack strategies as basals if I change my emphasis while teaching.

DESCRIPTIVE STUDY

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What Is the Relationship Between Spelling Mastery and Reading Achievement?

STATEMENT OF THE PROBLEM

Is there a direct relationship between spelling mastery which helps build vocabulary and reading achievement?

Realizing that my remedial students were extremely deficient in vocabulary, I explored and evaluated an avenue by which the students could consistently build vocabulary. This avenue was the spelling mastery approach. I understood that remedial students needed a straightforward and challenging way to increase their background of knowledge; therefore, I proceeded with the weekly spelling program. With the use of spelling mastery, the unknown words became part of their reading and writing vocabulary.

POPULATION

The student body is composed of 75% White, 15% Mexican-American, 8% Black, 1% American Indian, and 1% Asian. Most of the parents are blue-collar workers and 80% of the mothers work away from home. With both parents being employed at fulltime jobs, the children are socially deprived. Unfortunately, the homes are lacking in reading material. With a lack of time given to the children, it becomes the teachers' responsibility to provide social and educational experiences.

PRE-TEST

At the beginning of the school year, the Stanford Achievement Test, Form E, was administered. Results of the Pre-test for Total Reading are indicated in Table 1, Column A. Results of the Pre-test for Vocabulary are given in Table 1, Column B. Grade equivalent was used as an indicator of each student's ability.

PROCEDURE

Prior to Lesson 1, the teacher selects 10 to 12 vocabulary words from the reading material. The words are selected based on the following criteria: 1) words not previously introduced in the controlled vocabulary of the basal reader, 2) key words in the story which provide clearer understanding of the material, and 3) words most often missed.

Lesson 1

Step 1 - Present vocabulary words on flash cards. Students pronounce the words from prior knowledge or sound out the words, one by one. Teacher gives assistance if needed.

Step 2 - Students write each word immediately after being introduced, preferably by copying from the example in order to have the perfect spelling.

Step 3 - The copied word is read again, spelled letter-by-letter, covered and then written a second time from memory.

Step 4 - Each word is analyzed for its unique parts and then marked phonetically.

Step 5 - Students read the word in context by reading the completed sentence that is written on the chalkboard or chart prior to the lesson.

Lesson 2

Step 1 - Students review vocabulary words by reading each word, covering the word with one's finger or a paper, then writing it next to the printed word. Students proof their work for correct spelling.

Step 2 - Cover both words (see Step 1, Lesson 2) and write (spell) each word to complete the sentences on the pre-printed page (Appendix A).

Step 3 - Students write their own sentences using as many vocabulary words as time allows.

Lesson 3

Step 1 - Read story or selection pointing out the newly introduced vocabulary words. The words are cited in the paragraph or on the page before the reader begins. This highlighting gives the students an opportunity to visualize the vocabulary words in book-printed form. This additional emphasis enables students to recognize the new words more readily.

Lesson 4

Step 1 - Students study the vocabulary words by using the procedure of "look, write, spell and read."

Step 2 - Each child takes a Mastery Test by individually, orally pronouncing the vocabulary words, reading a short summary of the story and spelling the list of words (Appendix B).

POST-TEST

At the end of the 1988 school year, the Stanford Achievement Test, Form F, was given. The test results for Total Reading are shown in Table 1, Column A and the test results for Vocabulary are shown in Table 1, Column B.

The students' gain in Total Reading was as follows:

Average Gain 2.0 (G.E.) Median Gain 2.0

The students' gain in Vocabulary was as follows:

Average Gain 1.9 (G.E.) Median Gain 1.9

Table 1, Column A shows the gain in Total Reading, which includes the areas of Word Reading, Comprehension, and Word Study for each student for the school year. Form E was used for the Pre-test given in the fall and Form F was used for the Post-test given in the spring. For the 22 second grade students, the average gain was one year, eight months (1.8). For the ten third grade students, the average gain was two years, zero months (2.0). For the nine fourth grade students, the average gain was two years, four months (2.4). The total average gain for all students was two years, zero months (2.0). All students except three, exceeded the objective of the reading program which is one month growth for each month in the program.

Table 1, Column B shows the gain in Vocabulary for each student for the school year. As indicated above, Form E was used in the fall and Form F was used in the spring. For the second grade students, the average gain was two years, three months (2.3). For the third grade students, the average gain was two years, one month (2.1). For the fourth grade students, the average gain was one year, five months (1.5). Of the 41 students, only seven failed to meet the goal of one month gain for each month in the program.

However, the standard error of measurement for these tests is so large tht transfering the results to Grade Equivalent makes scores misleading.

Table 1, Column C enumerates the scores from the students' Spelling Mastery Tests. The scores in the first column indicate the average percentage correct for the spelling tests taken by each of the students during the school year. The average score for the second grade students is 80%; for the third grade students, 79%; for the fourth grade students, 82%. With few exceptions, the high spelling scores correlated positively to the gains in reading.

The scores in the second column of Table 1, Column C indicate the average, correct percentage for the verbal vocabulary tests taken by each student during the school year. The average score for the second grade students is 95%; for the third grade students, 99%; for the fourth grade students, 98%. For 33 out of 41 students, the high vocabulary scores (95% and above) correlate with their high spelling scores of 80% and above. Generally, the highest vocabulary scores correlate with the greatest gain in reading.

OBSERVATIONS

Even if the scores are suspicious in their accuracy of measurement pre- and post-, a change in attitude toward spelling from the negative to the positive was observed. At the beginning of the school year, the students approached spelling with apprehension. Some children stated, "I'm scared." Some children admitted, "I didn't study my words." By mid-year, the students began to have a positive attitude toward spelling their vocabulary words. Several children would ask the second day, "Is today the day for our Mastery Test?" The children eagerly came to class and ready to spell. Many parents related the message that their children were studying their vocabulary words regularly. By the end of the year, most of the children had gained confidence in their ability to spell. They found the Mastery Test to be challenging and rewarding. By keeping one's own Mastery Test score sheet, each child competed against himself or herself. The reward of improving one's score in each area was evident.

Each week the children also successfully incorporated many of their vocabulary words in their creative writing activities. The students became more fluent readers and they were better prepared for the Stanford Achievement Post-test.

IMPLICATIONS

1. Continue to use the Mastery Learning Program which stresses spelling mastery. Emphasize the relationship of the mastered vocabulary words to the better understanding of the reading material.

2. Use the outcome of the research in a presentation to the parents at the Cartwright Parent Conference in February of each year.

3. Point out the significance of the research to teachers at the Cartwright Inservice Day. Include the table of scores for the teachers to analyze the data.

4. File research paper in Cartwright District Office for future reference. Share the information with the District Reading Consultant.

REFLECTIONS

I feel it is a privilege to do action research and share what children are accomplishing. It proved to be simple to accomplish: I had the ingredients and information at my fingertips. Now I cannot keep from telling everyone what I found.

I was surprised to find the Mastery Testing I was doing becoming a reward for children. They wanted to take the tests to see their progress. The chance to perform was a motivating factor I had not expected. My study seems to prove a learning sequence occurred that I believed would happen when I started. Students move through growth in spelling, which builds vocabulary, which relates to reading ability growth. Traditional methods of teaching spelling and vocabulary still are beneficial for causing reading improvement.

Table 1

Pre- and Post-Test Results
Test: STANFORD ACHIEVEMENT, Form E and Form F

		Column A: Total Reading			Column B: Vocabulary			Column C: Individual Mastery	
Student	Grade	Pre-test G.E.	Post-test G.E.	Gain (months) G.E.	Pre-test G.E.	Post-test G.E.	Gain (months) G.E.	Oral Spelling %correct	Proncng Vocab %correct
1	2	1.5	2.8	1.3	2.8	5.5	2.7	86	99
2	2	1.5	3.7	2.2	2.8	3.2	.4	92	100
3	2	1.4	2.4	1.0	P.K	1.6	1.6	65	94
4	2	1.6	3.7	2.1	1.9	2.2	.3	80	100
5	2	1.1	1.6	.5	P.K	2.9	2.9	81	96
6	2	1.3	5.1	3.8	2.3	3.2	.9	98	100
7	2	1.2	2.5	1.3	K.3	5.5	5.2	93	100
8	2	1.2	3.2	2.0	P.K	5.5	5.5	98	99
9	2	1.3	5.1	3.8	1.6	2.6	1.0	89	100
10	2	1.3	3.7	2.4	P.K	1.6	1.6	95	98
11	2	1.3	2.0	.7	K.7	2.6	1.9	60	90
12	2	K.7	2.3	1.6	P.K	2.6	2.6	65	95
13	2	K.9	3.7	2.8	2.3	4.6	2.3	93	98
14	2	1.4	2.9	1.5	K.5	4.6	4.1	65	100
15	2	1.4	3.7	2.3	K.6	4.6	4.0	92	96
16	2	1.4	2.5	1.1	1.5	2.2	.7	60	90
17	2	1.2	2.3	1.1	1.0	2.0	1.0	58	90
18	2	1.4	2.1	.7	K.9	4.6	3.7	55	80
19	2	1.7	5.1	3.4	5.5	5.5	.5	100	100
20	2	1.6	5.1	3.5	K.4	5.5	5.1	95	99
21	2	1.4	2.8	1.4	1.2	2.6	1.4	97	99
22	2	1.5	2.5	1.0	1.5	2.9	1.4	60	80

Table 1 (continued)

Pre- and Post-Test Results
Test: STANFORD ACHIEVEMENT, Form E and Form F

		Column A: Total Reading			Column B: Vocabulary			Column C: Individual Mastery	
Student	Grade	Pre-test G.E.	Post-test G.E.	Gain (months) G.E.	Pre-test G.E.	Post-test G.E.	Gain (months) G.E.	Oral Spelling %correct	Pronong Vocab %correct
23	3	1.7	2.8	1.1	1.9	5.2	3.3	65	98
24	3	2.8	6.0	3.2	2.6	2.8	.2	92	99
25	3	2.0	4.0	2.0	2.0	3.4	1.4	91	100
26	3	2.1	3.5	1.4	3.0	5.2	2.2	70	100
27	3	2.2	3.1	.9	2.7	7.0	4.3	51	98
28	3	1.6	6.5	4.9	1.8	2.6	.8	80	100
29	3	1.6	3.9	2.3	2.1	2.2	.1	87	100
30	3	2.6	4.0	1.4	2.5	7.0	4.5	88	99
31	3	2.1	4.5	2.4	1.4	3.8	2.4	83	100
32	3	2.8	3.9	1.1	P.K	2.4	2.4	92	100
33	4	2.4	5.9	3.5	2.6	4.2	1.6	98	99
34	4	2.7	5.3	2.6	2.8	3.8	1.0	88	99
35	4	2.3	4.7	2.4	1.7	4.0	2.3	91	99
36	4	2.6	5.2	2.6	2.4	3.4	1.0	86	97
37	4	2.7	4.6	1.9	1.9	2.7	.8	67	97
38	4	3.0	3.9	.9	3.8	5.8	2.0	70	100
39	4	3.0	5.7	2.7	3.3	3.6	.3	89	94
40	4	2.7	5.3	2.6	2.8	4.0	1.2	95	99
41	4	2.3	5.0	2.7	2.9	6.3	3.4	60	100
		Average Gain 2.0 Grade Equiv.			Average Gain 1.9 Grade Equiv.			Total Average 80	97

Appendix A

BUILDING VOCABULARY

Name _____ Grade 4
#17
L.P.

1. canaries -

   C_____ are small, yellow, beautiful song birds that are good pets.

2. pigeons -

   P_____ are birds with a small head, a plump body and short legs that can become a nuisance.

3. conservatory -

   A ——— is a training school for music, art and other areas.

4. favorite -

   Something that is special to you is usually your _____ , like a _____ blouse or shirt.

5. ordinary -

   Something that is common is _____, like a common, old shoe.

6. melodies -

   M_____ are musical tones in a series that form the tune for a song.

7. breathe -

   When a person sings, he/she _____ deeply to make their voice project.

8. expecting -

   Lisa was _____ a certain bird for her birthday.

9. refused -

   The beautiful, little canary _____ to sing for the trainer.

10. strainers -

    Mother used the _____ to collect the tea leaves.

11. peninsula -

    A _____ is a small strip of land that extends out into the water.

Appendix B

MASTERY TEST

No. 10 Name _____ Gr _____
Date _____

Vocabulary List:

exciting	movement
African	hungrier
generally	awakening
rinds	favorite
weighty	distance
eagerly	trumpeted

Criteria: Read 100% in 12 sec. _____ % Time _____ sec. Spell: 100%
Kind of errors: _____ No. Correct _____ Score _____ %

Paragraph Reading: "Queen of the Circus Elephant"

The "bigger and better" circus had come to town. The children were excited to seen the clowns and hear the bands but they liked African Queen the best. She was the biggest elephant in all the world.

Mr. Fields, the trainer, fed African Queen watermelon rinds which she liked especially well. He rode in the same train car with her and treated her gently.

As the circus unloaded, African Queen did her part to help set up the tents and tighten the ropes. She became thirsty but there was no water for her. She trumpeted loudly and stamped her feet but Mr. Fields was some distance away and did not hear her.

African Queen used her "little finger" and worked herself free and started off to the city. When she found no water there, she tramped into a field where she found thousands of juicy watermelons.

The circus performers waited for her to lead the parade.

Criteria: Read 96% accuracy in 77 sec. Read ____ % Time ____ sec. Passed _____
Comprehension: Total 8 No. correct _____ Score _____ %

DESCRIPTIVE STUDY

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Improving Classroom Atmosphere with *Positive Action*

STATEMENT OF PROBLEM

After only three weeks into the 1988-89 school year, I found was dissatisfied with the atmosphere of my third grade classroom. I was spending a great deal of classroom time settling arguments, hearing complaints, listening to tattling and whining, and soothing children's hurt feelings. I realized that I would have to find a way to improve the classroom atmosphere. For one week I kept a log of the negative behaviors I observed.

Beginning Behaviors

Number of Instances	Type of Negative Behavior
6	fighting
13	acting out
16	whining and complaining
7	taking something he/she didn't own
10	using bad language
13	purposely saying something to hurt another's feelings
9	miscellaneous
72	tattling

After analyzing the data I collected, I realized that the instances of tattling far outnumbered all the other negative behaviors combined. Two years previously I had used a self-concept program called *Positive Action*. I had been impressed with the social growth the children had gained during that year. It seemed that the lessons they had learned through *Positive Action* boosted their self-esteem and helped them cope with social pressure. Would using the *Positive Action* program with this class improve the climate in the classroom?

RESEARCH QUESTION

My question was: Would teaching selected lessons from the self-concept program, *Positive Action*, to my third grade students, decrease the amount of student tattling and therefore improve the classroom atmosphere?

DESCRIPTION OF THE ENVIRONMENT

I teach a heterogeneous third grade class in a kindergarten through sixth grade school of approximately 500 students. In my class there are 14 boys and 12 girls. The majority of the students come from middle income homes. In 12 of the homes, there has been a divorce. Very often the natural parent, with whom the student lives, has remarried. In all of the remarriages, the step-parent has children of his/her own, the natural parent and the step parent have had a child together, or both of the previous statements are true. The racial make-up of the class is 1 Hispanic, 1 Black, and 24 Caucasians. I teach three to four lessons from *Positive Action* each week. The lessons range from 30 to 40 minutes each.

STEPS FOLLOWED

For the first week of the research project, I kept a daily log of negative behaviors I observed. When I analyzed the data, I found there were 72 instances of student tattling. On further examination, I realized that 9 of my 26 students were responsible for more than 75 percent of the tattling.

I then focused on these 9 students. I made an identification instrument to see if I could find common areas of concern. None of these students appeared to have a good self-concept. Many of them acted out in class to get attention, had trouble getting along with their classmates, had difficulty managing their emotions, and were underachievers.

After deciding to use the *Positive Action* program, I examined the third grade curriculum and chose the lessons which I felt would be the most helpful to my students. I originally planned for four 40-minute lessons each week. I planned to continue with my log of negative behaviors.

RESULTS

Week One

I saw no significant change.

Week Two

I saw a slight decline in the number of instances of tattling and a definite change in the vocabulary the children used when they tattled: "Mary isn't acting in a positive way," and "Bobby is giving me a bad self-concept."

Week Three

There was still only a slight decline in tattling. I did find that on the days I taught *Positive Action* as the first lesson in the morning, the atmosphere in the classroom was much more positive than on the days when I taught *Positive Action* towards the end of the day.

Week Four

I now adjusted my schedule to allow for three morning lessons of 30 to 40 minutes in length. There was a substantial drop in tattling this week, but we also had early dismissal on four of the five days for Parent/Teacher Conferences. These conferences did allow me to get input from parents. Many of them had noticed a positive change in their child's behavior. I learned that much of the *Positive Action* vocabulary and many of the techniques for handling problems and pressures were finding their way into the children's homes.

Week Five

I discussed my research project with my students. They were interested in the data and were quite determined to make a conscientious effort to reduce, if not stop, tattling.

Weeks Six through Eight

The total number of tattling instances for the last three weeks was only 34. That is less than half of the instances that were recorded during the first week of my research. I completed a second identification instrument on the nine children. The instruments showed substantial social growth for eight of these children.

CONCLUSIONS

I can conclude from this descriptive research project that there was a significant decline in tattling by my third graders. I can also point to an observable social maturity by eight out of nine identified children. What I cannot substantiate is that the self-concept program, *Positive Action*, is solely responsible for these changes. *Positive Action* did give us a shared vocabulary and the opportunities for the students and me to discuss problems and concerns which are relevant to third graders. Once the children and I identified problems, we could then work to alleviate them.

Perhaps the most significant implication of this research is that classroom atmosphere plays a very important role. It is essential that a teacher establish a positive climate within the classroom. Such a climate promotes the self-concepts of the students and is a foundation for learning.

REFLECTIONS

By conducting this research experiment, I was able to identify and alleviate a problem in my classroom. Through the procedures I followed, I achieved much more than I had originally planned. Not only did I see an improvement in the classroom atmosphere, I witnessed social maturity and improved self-concepts in my students. The children were not the only ones to reap the benefits from a self-concept program. I too, became more positive toward and appreciative of my students ad my job. Too often I have felt pressured by the demands of too much to teach in too little time. Little by little, the "academics" have pushed everything else out of the curriculum. This research project has caused me to stop and evaluate my teaching. I plan to continue with the

This research project has caused me to stop and evaluate my teaching. I plan to continue with the *Positive Action* program for the remainder of this year and for all the years to come.

DESCRIPTIVE STUDY

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Sentence Combining Instruction Gets Results Quickly

STATEMENT OF PROBLEM

A need and desire to write longer, interesting sentences was exhibited as students were challenged to combine three spelling words into one grammatically correct sentence. Students were dependent on the conjunction "and" or combined ideas without any linking word. They didn't have enough knowledge of sentence structure in order to manipulate and create different patterns

RESEARCH QUESTION

Will using sentence combining exercises as a strategy improve the written syntax and overall writing quality of my fourth grade students? Research studies historically confirm the effectiveness of this strategy.

POPULATION

This study took place in a fourth grade classroom of 22 students. All students are from a white, middle-class background. Three of the students are in an LD program for language arts; although they were somewhat exposed to the strategy, they were not evaluated.

PROCEDURE

A. Children were shown models of complex sentences from literature I had read aloud and explored how the author connected various related ideas usually set apart by commas. A list of connectives were developed to possibly use in combining ideas.

B. Initially, students were given a story consisting of only short kernel sentences. They were to study the story and then rewrite it again by changing the sentence, but not the important information in the sentence. This same assignment was given after the sentence combining program to evaluate if the strategy of sentence combining was understood.

Example: A man lived in a farmhouse. He was old. He lived alone. The house was small. The house was on a mountain. The mountain was high.

C. Each morning, students were presented with sets of simple or kernel sentences to combine into a longer, more elaborate sentence. The sentence must retain important information from each kernel and be grammatically correct. The content

of the sentences came from students' personal experiences and concepts from the social studies unit under study. The sentences created were discussed orally to hear alternate solutions or help correct one that was grammatically incorrect. On Fridays, the sentences assigned were collected for evaluation.

Example: Eli lived in a town. The town was small. The town was located in Northern Wisconsin.
Eli lived in a small town that was located in Northern Wisconsin.

D. After three weeks of practice with sentence combining, the children were assigned an essay in social studies about the dairy unit. Each student created a semantic map prior to the essay as a review. They were able to refer to this in composing the essay. Another essay was assigned at the end of the formal study to describe the processes in the production of butter and cheese. Again semantic maps were created as guidelines with the idea that the use of the map would help eliminate the constraint of not remembering the facts. This would affect the ability to write complex sentences. I compared the number of complex sentences written in the first essay to the second essay three weeks later.

RESULTS

All students who revised the story made of kernels improved from their first rewriting experience. Six of the 18 papers handed in the first time were without any connectives. However, on the second revision, they all were able to combine three kernels into a complex sentence made of clauses and phrases. Example of one child's revisions:

First Revision: A man lived in a farm house he was old he lived alone the house was small.

Second Revision: An old man lived alone in a small farmhouse.

Evaluating growth in the quality of writing can become quite complicated. One can count the number of words per T-units as explained in Kellogg Hunt's study. Or one can count the number of words per clause, number of clauses per T-unit, the number of words in free modifiers, and so forth. Besides the number of words included, I believe the choice of word usage also influences the quality of writing. With this in mind, I counted the number of complex sentences the students wrote in their first ten sentences in the two social studies essays. Eight students' papers were chosen randomly and I tallied up five types of sentences written: complex (contains clauses), compound, simple (may include phrases), fragments, and run-ons.

Type of Sentence Changes

First Essay		Second Essay	
Complex	13	Complex	30
Compound	9	Compound	5
Simple	46	Simple	29
Fragments	1	Fragments	0
Run-ons	11	Run-ons	3
Total Number	80	Total Number	70

There was a significant increase in the number of complex sentences in the second essay. Also the students used fewer run-ons and needed fewer sentences to explain the concepts. As always, "glitches" come in any study. The day the children wrote the second essay, I was not in school. Having a substitute did not seriously affect the quality of their writing.

Students with higher ability wrote with far greater sophistication than the majority of students, though students of lesser writing ability were better able to express themselves clearly. The struggle wasn't "how" to structure the ideas into sentences, but how to get the facts down in a logical, sequential format.

High ability student's sentences:
First, pasteurized, warm, fresh milk is sent flowing through a tank, while starter, which helps to curdle the milk, and rennet is added. In the tank, the rennet, starter, and milk are mixed, which soon turn into whey, the watery part of the milk, and curds, the thickened part of the milk.

Lower ability student's sentences:
Cheese is made from warm, fresh, and pasteurized milk. First, starter and rennet is added to the milk. Then the milk thickens and curdles. The curds are separated from the whey and the whey is fed to animals.

IMPLICATIONS

I strongly believe in a sentence combining program. It works after only three weeks of instruction. My students can create a variety of interesting sentences and appreciate the rich language in authors such as William Steig and Jean Craighead George. The program needs to exist with an active writing program to be successful. I believe we have to give them strategies to help them manipulate and control their language. Since children do not really change a sentence in revision, they need to automatically compose well-written sentences with strategies that have been internalized. Sentence combining is one such strategy to achieve this objective.

The kernels need to be created by the teacher and are not found in any ready-made format to fit your students' needs. Yet, this is the beauty of the program because you can include concepts in content areas and a myriad of writing skills in the kernels for the children to practice while they are composing a sentence of a "mature syntax." There is a sequence suggested by researchers as to ability levels in the types of sentences students are developmentally able to create. Frankly, I found it confusing. I focused more on the content of the kernels and learned to create a variety of examples. This experience was well worth my time for I can't imagine not including sentence combining as one viable strategy in my writing program. I learned to appreciate and understand how my students write and encourage my fellow colleagues to try it.

DESCRIPTIVE STUDY

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The Effect of Prewriting on Writing

STATEMENT OF PROBLEM

I was curious about the effects illustrating and Round Robin story building would have on my students. I thought both activities would be low anxiety prewriting activities to motivate low ability writers in my classes.

RESEARCH QUESTION

My original question was, "Will prewriting activities (illustrating and Round Robin story building) improve the quality of compositions and students' motivation to write?" Quality was defined in terms of fluency and grammar, fluency having the greater emphasis. The inclusion of grammar was mostly for my own information, my primary goal being to motivate the students to write more.

In this study, fluency was quantified by counting the number of sentences written and the number of words per sentence. I originally planned to use the number of syllables per word as well, but I dropped this due to the extensive amount of time that would be involved in tabulating this component. I also felt that two measures of fluency were adequate.

Grammar was evaluated in terms of three criteria: use of complete sentences, capital letters, and end punctuation. These were chosen on the basis of the students' familiarity with them and the fact that I felt that all students were capable of using them correctly.

POPULATION

The population I used was 28 underachieving fifth graders. These are students who strongly dislike writing and won't do it unless forced. I felt that although correct grammar is important, we needed to begin instruction by attempting to instill some desire to write and some enjoyment of it.

I met with this group for 90 minutes per day for 18 weeks. This is an integrated language and reading period. As a rule, language takes up 30 - 45 minutes per day and reading takes up 45 - 60 minutes. Because of the long period, however, I have the flexibility to change this around as needed. Consequently, when I gave the students writing assignments, I was able to give them adequate time to complete them in class.

STEPS FOR INSTRUCTION

Before beginning the writing part of the study with the students, I gave them a short attitude survey which evaluated their general feeling about writing as well as some more specific feelings and thoughts (Appendix A).

The first written paragraph I assigned was done without a prewriting activity. I picked a topic (My Favorite Day) that I thought would be motivating in itself so as to get a fairly accurate baseline on their writing. They were given no length requirements on this paragraph. (The students were quite thrilled with not having a minimum length requirement, showing me how little they like to write.)

Through the next eight weeks I conducted prewriting activities involving illustrating and doing a "class story" before writing. The class story involved a "Round Robin" story where one student starts the story with a sentence and the others each contribute a sentence. The story is left open-ended and then the students write an ending for the story.

I only used these two prewriting activities, but I also manipulated the sequence of instruction. We began with students illustrating and later we did both a class story and an illustration before writing. Later, I switched to doing the class story first but having the students write before they illustrated.

The same attitude survey was given eight weeks after the pre-test survey on the day of the last writing assignment to be evaluated for the study (Appendix A).

RESULTS

I was quite pleased with the overall results of this study, both in the area of the actual writing and in the attitudes about writing. First I will discuss the actual writing results (Table 1). For the first assignment with a prewriting activity (October 7), we began with a prewriting activity of drawing a picture (topic open) and wrote a story afterward to go with it. This did cause the average number of sentences to go from two to four. By adding a class story the next time, it went up to six. To see what would happen, the next week I went back to just an illustration as the prewriting activity. The number of sentences dropped to four, but went back up again to six the next week when they did a story again.

During this time, the students' attitudes were noticeably improving. Some comments were: "Can we write as much as we want?" or "Can I do another story?" (Unheard of comments up to this time!) I also noticed that the class story seemed to be actually more motivating than the opportunity to draw in class (not what I had expected). In fact, about half the class either didn't want to do a picture or spent a minimal amount of time on it.

At this time I chose to do a class story first and then have the students do their writing immediately afterwards. Then they had the option of doing an illustration after that if they wanted to. That week the number of sentences jumped up to 11! (The number of words per sentence did not fluctuate much throughout the study so I evaluated the fluency of the writing in terms of the number of sentences.)

The students were getting more involved in the class stories by this time. They were asking when we could do the next one and if they could be the one to "start it" next time.

Table 1

Results of Prewriting Activity Study

Date	Prewriting Activity	No. of Sent'ces	Words/ Sentence	Percent of students making no errors		
				Complete Sent'ces	Capitals	End Punct'n
9/29	none	2	9	69%	56%	74%
10/7	illus	4	9	65%	74%	61%
10/14	illus & cl story	6	9	58%	75%	71%
10/19	illus	4	9	75%	85%	80%
10/26	illus & cl story	6	9	67%	90%	90%
11/4	cl story-1st write opt'l illus	11	11	83%	78%	91%
11/10	none-opt'l illus	8	9	61%	61%	50%
11/14	cl story-1st write opt'l illus	11	8	83%	78%	91%
11/23	cl story-1st write opt'l illus	23	9	43%	48%	43%

On November 10, I did not do a prewriting activity. This was to evaluate the progress the students had made in terms of motivating themselves to write. The results were eight sentences: quite an improvement from the initial two!

The last two weeks I went back to class story, then writing, and then an optional illustration. The results went back up to 11 and finally, on November 23, to 23! (Note: The last week two students had sort of a competition between themselves to see who could write the most and wrote over seventy sentences apiece. By subtracting their results out of the group, the class average was still seventeen sentences - the highest yet!)

The measures of grammar fluctuated during the study but showed slight improvement overall (except for the last sample where they all dropped). I attributed this to the fact that when the students are writing more, they have more opportunities to make mistakes. Also, editing is a later step in the writing process than generating a first draft of ideas.

The attitude survey also indicated positive results (Table 2). A significant number of students felt more positive toward writing by the end of the study with no one saying they "hated it" anymore!

Table 2

Pre- and Post-Writing Attitude Survey

Question: How do you feel about writing?

Results	September	November
A.) I like it	9%	59%
B.) it's ok	65%	32%
C.) I don't like it, but I don't hate it	17%	9%
D.) I hate it	9%	0%

IMPLICATIONS AND CONCLUSIONS

There was a steady increase in the writing fluency of the students throughout the study. This shows that my two prewriting activities helped to motivate students to write. In addition, I found that the more actively involved the student is in the prewriting activity and the choosing of the topic, the more motivated to write that student will be. Consequently, students need to be properly motivated to write. When this happens, even "low achieving" students can succeed in writing and enjoy it!

I found researching to be "fun." I also used my results to argue at my school for methods and materials I wanted. Now I find myself encouraging other teachers to research. On Parent Night, I had materials to show parents that indicated each child had made progress. The materials I had collected gave a perspective to progress I hadn't had before. The material substantiated my feelings about growth during the year. I really enjoyed seeing my students' progress as I looked back over the time of the study.

Appendix A

Name_____

How Do You Feel About Writing

1.) How do you feel about writing? (circle one)

A.) I like it B.) It's ok C.) I don't like it a lot but I don't hate it. D.) I hate it

2.) I like to write when _____

3.) I don't like to write when _____

4.) What would help you improve your writing? _____

5.) If you were a better writer, how would that help you in your other school work?

_____

6.) If you were a SUPER writer, what could you do that you can't do now?

_____

7.) What don't you like about writing assignments? _____

8.) What do you like about writing assignments? _____

DESCRIPTIVE STUDY

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Will a Three Level Guide Increase Sixth Graders' Comprehension of Text?

STATEMENT OF PROBLEM

Teaching effectiveness is increased by creating conditions in which students will experience success. I faced the problem, at the sixth grade level, of preparing students to interact successfully with content area text on an individual, independent basis, the type of interaction that will be expected of them in departmentalized junior high classes. Compounding this problem were the facts that many of my students were reading below grade level and that the content area tests are written at and above grade level. I asked myself: "Will the utilization of a three level comprehension guide, used in conjunction with independent reading of expository text, increase student literal and inferential comprehension and retention of concepts?

POPULATION

The sample used for this research was a sixth grade class in Williams, Arizona, a rural community of approximately 2,500 people. My class was about 60% Caucasian and 40% Hispanic. It contained 15 boys and 9 girls, two remedial reading/math students, one ESL student, and one student who had been retained. Approximately 27% of the class began the school year reading below grade level.

STEPS FOLLOWED

The research was carried out over two nine-week instructional periods. For the first semester the class received social studies instruction, in world history, in the traditional manner that was employed successfully last year. Traditional instruction in this context consisted of administering a unit pre-test, lecture, discussion, silent reading, answering chapter questions, and administering a unit post-test. Lecture and guided discussion consisted of covering chapter concepts, expanding upon concepts indicated as interest areas by student responses, discussion of reading comprehension questions and chapter questions, and how the answers were derived. I allocated approximately thirty minutes of the class period to lecture and discussion three days per week.

TREATMENT ACTIVITIES

The only difference in treatment between the two instructional periods was that students utilized an adaptation of Herber's Three Level Guide in conjunction with their silent reading assignments. The three level guide (3lg) utilizes statements concerning the text content at text explicit, text implicit, and abstract cognitive levels. The student indicates which statements he agrees and disagrees with (Appendix A). I made the adaptation of requiring that students list page

and paragraph numbers where information was found to support or refute each statement. I began the second instructional period by modeling how the 3ig should be completed. As a class we read the text chapter and filled out the 3ig. I explained where I found information to support or refute each statement. On the next chapter, I assigned the first level to be completed by the students, individually, during silent reading. During lecture/discussion, we graded the first level and discussed student's answers and how they came to those answers. Then as a class, with myself modeling, we completed the next two levels of the 3ig. We discussed each step various students used in establishing their answers, how they made the connections between the text and the 3ig, how they interacted with and processed the information in the text. I assigned the next level of the 3ig to be completed in each of the two subsequent chapters. Each week we would discuss, and let students demonstrate, how we came to our answers and how we processed the text. We continued these discussions for the duration of the instructional period.

During both periods of instruction, chapter questions were scored and collected; a comparison was made based on percentage correct. A comparison was made of growth exhibited during unit instruction for each instructional period: pre-test vs. post-test scores. I also compared comprehension question category percentages between post-tests of the two periods.

RESULTS

I was pleased to see improvement in not only students' grades but also in attitude and self-confidence in being able to successfully interact with the social studies text. I noted an increased enthusiasm and participation in our lecture/discussion sessions; after experiencing success, students were eager to contribute their ideas and opinions. Although this was not an experimental study, and other variables may have impacted students' performance other than the 3ig's, I feel compelled to attribute this success to them as this dramatic improvement was not evident in other content areas in which the 3ig's were not utilized.

CONCLUSIONS

I was extremely pleased and excited when I reviewed the results of this action research project (Table 1): I had believed that the 3ig would be effective and found it gratifying to be able to substantiate my beliefs to the administration and colleagues on the faculty.

I believe that the 3ig has effectively helped bridge the different reading requirements between narrative and expository text interaction. It has helped students make the connections between the text, text questions, and overall text concepts.

Many of my students could read smoothly and with expression; however, text and paragraphs with multiple concepts proved to be problematic for them. They were looking for the one "main idea" in the text and had difficulty comprehending subordinated ideas and ordering the multiple concepts of expository text. They focused only on details that supported the "main idea" as they perceived it, ignoring other information in the text.

The 3ig gave students a reference point as they interacted with the text. It provided students with possible "important concepts" which, once identified, helped broaden their perspective and utilized their ability to identify supporting details. The 3ig built on student skills developed through their interaction with narrative text. The 3ig also helped students succeed in answering text questions which assumed that the reader could identify the subordinate ideas and details. Ability to answer text implicit questions increased dramatically as the students started thinking more divergently toward the text.

Table 1

Effect of the Use of the Three Level Guide

Grade	# During Per. 1	# During Per. II	Increase(+) or Decrease (-) in # of Students
A	5 (23%)	9 (41%)	+
B	4 (18%)	3 (14%)	+
C	6 (27%)	6 (27%)	
D	2 (10%)	3 (14%)	-
F	5 (23%)	1 (05%)	-

Summary of Table I:

Students showing improvement = 86%
Students doing passing work Per. I = 77%
Students doing passing work Per. II = 95%

In my opinion; the class discussions were the most enlightening and beneficial aspect of this instructional technique. We would discuss the 3ig item by item: students would state their opinions on each item and cite information, by page and paragraph, that supported their answer. We would look for consensus and discuss if the cited information was valid. We would discuss every citation for an item before moving on to the next item. Many students were initially surprised to find that supporting information could be found throughout a chapter, not merely in one specific location. Students were also exposed to various connection-making strategies employed by their classmates when discussing citations. Also, as we proceeded through the 3ig level by level, the number of citations would increase and the connection-making strategies would become more diverse. At the abstract level students discovered that items could be answered either way, depending upon the citations used and the background information which the student possessed.

Initially, most students would participate in the first level of the discussion, text explicit statements. This was the type of information that they were used to processing. The poorer readers contributed less at the second level, though they listened to their classmates' reasoning and examples. Few students, except the most proficient readers, volunteered information at the abstract level.

As the year progressed, increased involvement in the class discussion was dramatic. Many of the poorer readers were significantly contributing at the second level and many students would venture ideas and opinions at the abstract level; this is where we spent most of the discussion toward the end of the project. The students were becoming creative and more divergent in their thinking and they looked forward to and enjoyed sharing their ideas with the class.

I would link the increased student performance to their ability to successfully interact with text implicit and abstract concepts, the basis for the majority of the chapter questions and test items. The 3ig has helped many non-proficient readers interact successfully with the text by leading them beyond the text explicit answers to inferential and divergent thought. I have found it to be especially effective with my ESL and remedial reading students. I plan to continue to refine these 3ig's in social studies and to expand their use to my other content areas.

Appendix A

NAME: _____

A NEW WAY OF LIFE

Agriculture enabled people to settle down; this required people to fill new roles in society and develop new tools.

Place a check next to each statement you believe to be true. Place an X next to each statement you believe is false. Write the page and paragraph numbers where you found evidence next to each statement. Evidence may be found in more than one place.

Farmers began building permanent homes.

Pottery was discovered when someone noticed that fire hardened clay.

People needed ways to prove they were owners of things.

All farmers became rich and important.

The invention of the plow made farming more efficient.

The Mesopotamians used baked clay for jars, writing tablets, and toys.

Farmers lived close together for safety.

People travelled less after agriculture was developed.

Women did not work in the fields.

Some people's job was to only make pottery.

Farmers had more possessions than gatherers.

The agricultural revolution involved many changes other than farming.

Writing was developed about 8,000 years ago.

People in Mesopotamia still use ancient building materials.

Farmers were responsible for the development of cities.

One person cannot be an expert at all things.

Farmers were responsible for increased trade.

Ancient farmers were indirectly responsible for helping modern archaeologists and historians.

Plows were invented at the beginning of the agricultural revolution.

The agricultural revolution was responsible for "class" societies, much like we have today. (ex. rich, middle, poor)

DESCRIPTIVE STUDY

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Which Is Better: Free Writing or Teacher-Directed Writing?

STATEMENT OF PROBLEM

Free writing in journals has been backed by research as a means of thinking through ideas, improving creativity, and increasing writing skills. I wanted my seventh grade remedial reading class to experience and learn from journal writing. Would I be able to help these reluctant students improve their writing skills more by giving them direction or free writing?

RESEARCH QUESTION

Is free writing or teacher-directed writing best for my remedial readers?

POPULATION

The subjects were 11 seventh grade remedial readers. The four girls and seven boys were all similar ages and backgrounds.

PROCEDURE

Each subject was given a journal (spiral notebook) on September 19, 1988, to record and keep his/her writings. Every school day for 27 weeks, students wrote in their journals for approximately 10 to 15 minutes. They were given specific topics and teacher modeling for the first five days. Free writing was alternated with topic direction throughout the rest of the study.

RESULTS

The results showed a definite preference for teacher-directed writing over free writing. There was no significant difference between the boys and the girls. All of the subjects expressed in writing as well as verbally their anger over free writing. Sample comments were: "I can't think of eneything to wight!", "Well I have nothing to write about", "I couldn't think of anything to write", "I have nothing really to say", "this is boring". This type of comment was plentiful and continued throughout the study whenever free writing occurred. Student frustration was evident.

The free writing exercise never produced more than half a page of writing. Teacher-directed writings varied from half a page to two pages of written information. Both treatments produced a written dialogue between teacher and student that continued throughout the study. All subjects were writing more at the end of the study.

DISCUSSION

For this particular class, the teacher-directed writing experiences were significantly better than the free writing exercises. The number of subjects was small, making it difficult to generalize and say that free writing is difficult for poor readers. For this class of poor readers, free writing was very unpopular.

Further research with both good and poor readers may give a clearer picture of the effects of free writing on skilled and unskilled readers. Based on the results of this study, I have given topic assignments for writing) which give the student predicating words such as "because" and "however" (Miles, 1967). A topic such as, "The driving age should be raised to 18 because," gives students a direction and forces them to think and give reasons to support their views. Children need direction in writing and teacher-directed journaling gives them the opportunity to learn and develop their writing skills through written communication.

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DESCRIPTIVE STUDY

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Will Teaching Highlighting Influence Comprehension?

STATEMENT OF THE PROBLEM

My problem was assigning students to read recipes and getting them to comprehend their jargon. I have been battling this dilemma for quite some time. My students from time to time make it quite clear that I am off-the-wall for thinking or even suggesting that they need to understand a recipe for it to turn out and be edible. Previously, I had ignored the situation and if something did not turn out, I would simply say, "Better luck next time! Isn't it amazing that the words in your recipe are trying to tell you something?" Needless to say, I was sounding like a broken record and it was about time I concerned myself with the problem.

RESEARCH QUESTION

My question was: Will the use of markers to highlight main idea units influence a student's comprehension skills and strategies when reading recipe jargon?

POPULATION

My Home Economics class evolves out of a school of 1100 students, located in a suburb of Milwaukee, consisting of a predominantly white community. I am responsible for grades 9-12 with 20-25 students per class. We operate on a 50 minute class period. Being an "elective course," all reading levels are prevalent ranging from class valedictorian to possibly a dyslexic student.

PROCEDURE

Several days before an upcoming foods lab was to occur, I presented each student (sophomores and juniors) with a copy of the recipes to be prepared.

A. Each student was provided with a marker and instructed to highlight any word/words not understood when reading. I modeled how to highlight.

B. Upon completion of reading the recipes, the papers were collected. Unfamiliar words were listed on the board and also in sentence forms.

C. Chairs were placed in a circle and a discussion was held defining the highlighted words.

D. The following day, a test was administered. A variety of forms of testing were tried with each change of recipe. The types of tests ranged from writing out word definitions, multiple choice, and true/false questioning. Each test contained 20 questions to be answered in a 15 minute time period.

E. After the tests were collected, students worked in their lab groups to plan out labs for the following day Test scores were recorded on a chart next to the student's name and number of words highlighted in the recipe.

F. Upon returning to class the following day, actual hands-on experience in the foods lab took place. The food produced as a result of the lab was be another form of measure used to determine highlighting effectiveness as a study aid. Then, a comparison of test scores and lab results was examined for similarities.

It was hoped that highlighting would have a positive correlation between what the recipe stated and how the students interpreted the recipe directions and the end results of the prepared product. The diagnostic procedure continued over a three month period.

RESULTS

Using highlighting as an only means for recipe comprehension proved ineffective. Ninety percent of the time, unskilled readers claimed they "knew it all." They only highlighted an average of one word per recipe. These readers also produced test scores of 70% and below. Upon entering into the foods lab setting, they failed to complete the lab adequately, resulting in low quality products.

The skilled readers questioned recipe jargon 98% of the time, highlighting four to five words per recipe. Testing results likewise proved highlighting to be a valuable tool with scores ranging between 90-98%. When placed in a lab situation these students were on-task, producing high quality food products.

I am going to toss this strategy out the window as it did not encourage the unskilled reader to improve on comprehension skills.

DISCUSSION

The obvious problem of comprehending recipe jargon still continues to haunt me in the foods room. The thrill of using markers seemed to be the hit of the hour, with little thrust placed on grasping knowledge about the recipe. I believe that these results occurred because of several implications suggested from the research literature on highlighting. First, highlighting is most effective for older students and adults. From my observations, the younger age group is still having fun coloring with markers. Also, peer pressure of being "poked fun at" could influence whether or not a student chooses to highlight a word/words when the person next to them "knows it all." Second, strategies for learning vocabulary and concepts in unfamiliar material may need to be presented by modeling. This lack of a strategy was evident when, through the process of group discussion, unfamiliar words were clarified. Students were not able to make an

association between what the recipe stated and what was to actually take place in the lab. Better resutts occurred when subsequent instruction included demonstration. Third, the unskilled reader has a difficult time using highlighting because it requires comprehension to know what to highlight. I did observe that the lower reading achievers were those who had "fun" with the markers. If highlighting was to be incorporated into the classroom, clearly demonstrating how and what to highlight visually several times will enhance student learning. This instruction would help students focus on vocabulary comprehension strategies along with providing a hands-on experience.

CONCLUSIONS

Analyzing a so-called "popular" study strategy has been a valuable learning experience. I would feel confident in teaching how to use highlighting as a diagnostic tool in the classroom to other educators. Why a person highlights can provide positive learning and comprehension effects on an individual if properly taught. Most important perhaps, is the fact that I now realize sophomores and juniors are still kids at heart; hence, I need to better equip myself with structured strategies with this age group.

EXPERIMENTAL STUDY

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What Effect Will Inventive Spelling Have On Kindergarten Children's Learning to Read?

STATEMENT OF PROBLEM

It is not known if the study of words in isolation really makes a difference, or if more student writing and exploration of their self-generated words would be just as effective in learning to read.

Ilictridmibic. A new language from another planet? No, it's a message written by a six-year-old student. He wrote, "I like to ride my bike." As children grow and develop, they become aware of all aspects of written language and how to put them together to communicate meaning. Invented spellings are written by the child as he hears the sounds in words rather than using the accepted spelling. Goodman (1985) tells us a child's "miscues" are "a window of the mind." He says errors are a piece of information that tells us most importantly what the child already knows and also what he has yet to learn. Seeing the connecting places in children's minds assists when teaching because we then can see how he relates and connects to rules and generalizations of the English language.

Some research literature looks at the historical perspective of the research review and the basic philosophies upon which spelling, writing, and reading is based. Chomsky (1970) has stated that if children are allowed to invent their own spellings for familiar words, their spelling will become more conventional as they develop if they are given the opportunity to write frequently. Horn (1957) states that the utility of a word should be the reason a word is placed in a spelling program. Read (1975) and Beers and Henderson (1977) have shown that spelling is not simply a function of sound letter relationship but it is closely related to the structural and semantic relationship of concepts behind the words themselves.

Some studies such as those of McKee (1927) and T. Horn (1960) indicate that the word list approach is more effective than a context approach. Some are still more concerned with the Holistic Approach.

Reviewing this literature indicates there is a large majority of research to be found in spelling and the effects of writing rather than spelling and reading. Therefore, this investigation strives to find the link to successful reading.

RESEARCH QUESTION

What differences will occur when comparing inventive spelling and daily writing to teaching words in isolation from a published basal program?

The primary purpose of this study was to evaluate the effects of instructional emphasis on

invented spelling within writing activities and students' achievement in reading. Students' attitudes concerning this emphasis were also examined in order to help better understand the role of motivation in learning to read.

The problem of this study was non-directional; therefore, the investigation included the following three hypotheses:

1. There will be no significant difference in Group A's and B's reading ability as determined by the
   - San Diego Quick Assessment
   - Holistic Scored Writing
   - Attitude Survey

2. Students in Group A will show a significant difference in reading ability as determined by
   - San Diego Quick Assessment
   - Holistic Scored Writing
   - Attitude Survey

3. Students in Group B will show a significant difference in reading ability as determined by
   - San Diego Quick Assessment
   - Holistic Scored Writing
   - Attitude Survey

POPULATION

The population used in this investigation consisted of 18 first grade students enrolled in Kyrene Elementary School in Phoenix, Arizona. Subjects were chosen by ability and sex:

6 high	3 girls	3 boys
6 medium	3 girls	3 boys
6 low	3 girls	3 boys

The subjects were divided between Groups A and B. Each Group was pre- and post-tested using three instruments: Holistic Scored Writing Samples, San Diego Quick Assessment Wordlist, and an Attitude Survey. Group A received traditional spelling instruction with no daily creative writing activities. Group B received invented spelling method taught with daily creative writing activities.

MEASURES USED

The San Diego Quick Assessment (S.D.Q.A.) word list (Appendix A) is a sample of words to be read by each student. Each student must read as many words as possible orally to the test administrator. Each child will stop after they have made a third miscue. Each student must demonstrate a substantial increased reading ability of the next word list level of reading. For example: To be a significant difference in the study, the child must be at least one graded word list above the other group's reading ability.

Students were asked to write about a familiar topic (families) and the sample was scored holistically (Appendix B).

A teacher-made survey was administered orally to all students. These questions are directly related to identifying students' attitudes towards reading.

PROCEDURES

1. Pre-tests were given during the first week of school. The testing area was in the classroom with no other students, only those being investigated. The S.D.Q.A. test was administered one-on-one between the teacher and the student.

2. The Holistic Scored Writing was given directly after the S.D.Q.A. The teacher gave oral directions and the children were given as much time as they needed to complete.

3. The Attitude Survey was administered first. The teacher read the questions to all students and students filled in their answers.

4. Instruction began in the second week of school. Group A was with Teacher X using the traditional published word list. Group B was with the invented spelling and writing teacher, Teacher Y.

5. Teacher X gave Group A a spelling test each week using the test study method. Teacher X gave a pre-test at the beginning of the week and at the end of the week a final spelling test. Teacher X also did the spelling book activities that went with each lesson such as a cloze worksheet. Teacher X did not do any journal writing, storybook writing, and did not use the children's writing in any way to assist with learning of spelling new spelling words.

Teacher Y utilized activities such as daily journal writing, story book writing, and transformation activities. At this time, children were given the opportunity to experiment with the spelling of words. Children could explore different ways to write and spell. Teacher Y was there as a facilitator to assist the child if the child requested her assistance. Also, these students used peers to assist them. The children in this group accumulated new words and their spellings as self-diagnosed. Each child explored the words.. Each child, therefore, was learning new words from his/her peers and the teacher. The children were building their own spelling vocabulary because they chose the words they needed as they experienced a necessity to use them. Teacher Y's function was as a facilitator for language production.

POST-TESTS

The post-tests were given during the tenth week of school. This was the ending date of the two and one-half month investigation.

The first test given was the Reading Attitude Survey. This test was administered orally by the teacher in a whole group setting.

Following the Reading Attitude Survey was the Holistic Scored Writing. Children worked until they decided it was completed.

The last test administered was the S.D.Q.A. This was given individually.

RESULTS

The data collected below shows gains were made by all treatment groups on all post-tests given. The scored writing samples and the S.D.Q.A. showed equal gains in both Groups A and B. The only post-test that showed an increased amount over another group was the Reading Attitude Survey.

San Diego Quick Assessment: Results for Group A

Pre-Test					Post-Test				
Student #	PP	P	1	2 3	Student #	PP	P	1	2 3
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				

San Diego Quick Assessment: Results for Group B

Pre-Test					Post-Test				
Student #	PP	P	1	2 3	Student #	PP	P	1	2 3
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				

Holistic Writing Results

Student #	Group A Pre-	Post-	Student #	Group B Pre-	Post-
1	no	yes	1	yes	yes
2	yes	yes	2	yes	yes
3	yes	yes	3	no	no
4	yes	yes	4	no	no
5	no	no	5	yes	yes
6	yes	yes	6	no	no
7	yes	yes	7	no	yes
8	no	no	8	yes	yes
9	no	no	9	yes	yes

The Reading Attitude Survey is the only area where a significant difference was measured. Students in Group B responded to all questions positively in the post-test; whereas students in Group A did not have an overall score that showed a change to positive responses in their attitudes.

CONCLUSIONS

The problem this research undertook was to investigate the effects inventive spelling, daily writing, and a traditional basal spelling program have upon children's success rate in learning to read.

Investigations were made comparing achievement and attitudes for students whose curriculum emphasized invented spelling and daily writing vs. traditional studying of new spelling words in isolation from a published spelling program.

One of the major conclusions drawn from the investigation was that both methods were successful in teaching spelling. The data analyzed showed similar results, neither method displayed a significant difference in students' achievement.

However, the invented spelling/daily writing group did show a significant difference from the other group in reading attitude. This group believed themselves to be good at reading and spelling words. All students in this group had a positive attitude about reading, whereas only three-quarters of the other group felt they were good at reading at the conclusion of this study.

Even though one group felt more successful than the other group, both groups increased the same amount in their spelling/reading vocabulary.

In conclusion, this research demonstrated that a successful spelling/reading program emphasized daily writing and frequently used words resulted in a positive effect on both achievement and attitude. The traditional teaching approach also showed a positive growth in achievement. Utilizing both techniques should be considered for an effective spelling program in first grade.

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Appendix A

San Diego Quick Assessment List: Answer Sheet

Name _____ Date _____

School _____ Teacher _____

PP	P	1
see _____	you _____	road _____
play _____	come _____	live _____
me _____	not _____	thank _____
at _____	with _____	when _____
run _____	jump _____	bigger _____
go _____	help _____	how _____
and _____	is _____	always _____
look _____	work _____	night _____
can _____	are _____	spring _____
here _____	this _____	today _____

2	3	4
our _____	city _____	decided _____
please _____	middle _____	served _____
myself _____	moment _____	amazed _____
town _____	frightened _____	silent _____
early _____	exclaimed _____	wrecked _____
send _____	several _____	improved _____
wide _____	lonely _____	certainly _____
believe _____	drew _____	entered _____
quietly _____	since _____	realized _____
carefully _____	straight _____	interrupted _____

Appendix B

PRE-TEST HOLISTIC SCORED WRITING

Student Directions

Pre-writing Prompt

Families are special people. I would like to learn about who is special in your life. Who are the members of your family? Do you have brothers or sisters? What do you like to do with your mom or your dad? What do you like best about your family times together?

Directions

Please write three or more sentences about your family. Be sure to:

- Use capital letters where they belong.
- Print neatly.

****

Grade One - Scoring Criteria

1. Objective

Constructs 3 - 5 word sentences.

Score "Yes": Student writes 1 or more sentences, 3 or more words long.

Score "No": Words do not appear to be sentences OR sentences are less than 3 words.

2 Objective

Uses capitals correctly.

Score "Yes": Student consistently uses a capital for first word of each sentence, for the word "I," and names of persons or pets.

Score "No": Student fails to capitalize words at the beginning of each sentence, the word "I," or proper names. (Do not penalize failure to capitalize other words requiring capitals or capitalizing words that should not be capitalized.)

3. Objective

Prints legibly.

Score "Yes": As you read the writing sample, you can decipher all but one or two words without pausing or re-reading. (Legibility is the key, not "standard-ness" of letter formation.)

Score "No": More than two words are illegible, i.e., you cannot decipher the words without pausing or guessing.

EXPERIMENTAL STUDY

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Can Student Retention of Vocabulary Be Influenced by Pre Reading Activities?

STATEMENT OF PROBLEM

The purpose of this study is to discover if student retention of story vocabulary words can be influenced by the methods the teacher uses to introduce the new words.

QUESTION RESEARCHED

Does introducing story vocabulary words to first graders using Big Book Basal Readers and introducing the new words using contextual cues have an effect on retention?

SAMPLE POPULATION

This research was done at Abia Judd Elementary School which was opened this fall. The students had previously attended kindergarten at one of the five other elementary schools in Prescott, Arizona. The research group was composed of 14 first grade students who were placed in the average reading group as a result of their scores on the beginning of the year reading test. The groups were divided into a control group and an experimental group (described below). There were no students in either group who were receiving special reading help with a resource teacher or a Chapter I reading teacher.

Control Group

This group was composed of three boys and four girls. One student had been in developmental kindergarten, one student had been in pre-first, and two were repeating first grade.

Experimental Group

The experimental group was composed of four boys and three girls, two students had been in pre-first and two students had repeated kindergarten.

PROCEDURES FOLLOWED

Control Group	Experimental Group
1. Reading period 20 minutes each morning.	1. Reading period 20 minutes each day.
2. Teacher writes the new words for each story on the chalkboard.	2. Teacher, using Big Book Basal Reader, asks the reading group to silently read the new story one page at a time. Students to raise their hands when they "discover" a new word in the story.
3. Teacher pronounces and explains what each word means. She then asks students to repeat the new words.	3. When the students "discover" a new word, the teacher reads aloud the sentence the new word was found in, leaving out the new word. Example: Bear can --- with Chip.
4. Teacher calls on volunteers to read the new words from the chalkboard.	4. Students predict what the new word means and read the sentence using the new word to confirm their predicted meaning.
5. Students read the story from their basal reader in their reading group.	5. After all the new words have been "discovered," the students will take turns reading orally from the book.

RESULTS

The entire study lasted approximately 11 weeks through 2 Big Book and 2 basal stories. The pre-tests and post-tests were alike in format and consisted of finding the correct vocabulary word and either circling, placing and "x" on, or underlining the correct word. An example would be: "Find the word with and underline it with an orange crayon." The students were given a pre-test before the lesson for each new reading story. The post-test was given the following day after the students had read the story and completed the workbook pages that correspond with the story.

The statistical results show the number of combined errors made by the members of each reading group for each story. The results are broken down into pre-test scores and post-test scores for each group for each story.

The students were using the *New Friends* and *Mortimer Frog* basal reader published by Harcourt, Brace, and Javonovich.

Pre-test

New Friends, published by Harcourt, Brace, and Javonovich

Control Group		Experimental Group	
Story #	# Errors	Story #	# Errors
1	4	1	5
2	5	2	4
3	11	3	6
4	6	4	6
5	3	5	5
6	11	6	8
7	13	7	2
	53		36

Post-test (Recall)

New Friends, published by Harcourt, Brace, and Javonovich

Control Group		Experimental Group	
Story #	#Errors	Story #	# Errors
1	0	1	2
2	1	2	1
3	2	3	1
4	1	4	1
5	1	5	1
6	5	6	5
7	1	7	1
	11		12

The post-test results show that both the control group and the experimental group were able to reduce the number of errors in their recall of story vocabulary words for each story. There does not seem to be a noticeable difference that could be caused by teaching style. The use of Big Books and context to learn words is as good as the traditional technique for teaching vocabulary recall.

New Vocabulary Identification Pre-test

Mortimer Frog, published by Harcourt, Brace, and Javonovich

Control Group		Experimental Group	
Story #	# Errors	Story #	# Errors
1	1	1	4
2	0	2	1
3	7	3	2
4	7	4	3
5	0	5	1
6	9	6	4
7	4	7	5
	28		20

New Vocabulary Identification Post-test

Mortimer Frog, published by Harcourt, Brace, and Javonovich

Control Group		Experimental Group	
Story #	# Errors	Story #	# Errors
1	1	1	2
2	0	2	0
3	3	3	1
4	2	4	1
5	0	5	0
6	5	6	2
7	2	7	3
	13		9

The results from the pre-test and the post-test show that both groups were able to reduce the numbers of errors they made in vocabulary word identification. There is a slight reduction in errors made by the experimental group that could be a result of teaching style. Most importantly, both techniques help students learn new words.

CONCLUSIONS

In drawing conclusions based solely on statistics, I noticed the testing procedures basals use eliminated any use of context clues which would seem to favor the control group results. Their instructional method relied on the teacher presenting the words in isolation so visual and auditory clues for word identification were all they were used to. Instruction for the experimental group encouraged them to experience and use context to word attack. In spite of having context clues removed during testing, they were able to improve almost as much as the control group on post-tests. I took pride in this reduction because it shows my instruction to be effective. Based on test scores, I would have to say both methods of introducing new words are effective for first grade readers. The test results show that I can teach using either method and not reduce my students' test score results. This means I can eliminate basal stories and use Big Books and literature with meaning-based vocabulary learning techniques to teach reading. I believe in the new technique and my results on typical publisher tests will be at least equal to the traditional method.

In drawing conclusions based on things I observed in class and recorded in my journal, I would have to conclude that teaching vocabulary words using Big Books is more effective. I noticed with my experimental reading group that more students were actively involved in "discovering" new words and they were also more likely to be paying attention to the story while other students were reading orally. The students themselves expressed a preference for the Big Book readers for the following reasons:

They thought the large print was easier to read.

They liked the larger illustrations.

They said reading from the Big Book orally made them feel "special."

I noticed that the Big Books seem to act like a magnet for my students; during free time

many of the students in my class read from the Big Books. I did not notice students choosing to use their free time in class to read from their standard size basal readers. Although these changes were not caught my test score results, they are worth switching techniques to achieve.

The test resuls do not show intangible results such as the students' enjoyment of reading. This type of result I could see in my students, but I could not document with test scores. I noticed my experimental reading group was more actively involved with each lesson; they seemed to be enjoying the lesson more and were more likely to be attentive when other students were reading orally. Next time I will create preassessment measures to capture such changes.

The style of teaching I used with each reading group did not make a statistical difference in my students' performance but I feel it did make a difference in my students' enjoyment of their reading lessons.

EXPERIMENTAL STUDY

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The Interactive Inquiry Approach to Teaching Vocabulary

STATEMENT OF THE PROBLEM

Research from recent years has strongly supported the idea that vocabulary is best taught in context. However, there are many different ways of doing this. The challenge appears to be the development of a program which teaches enough new words with a high enough retention rate to be an efficient use of time. I developed a new vocabulary program and wanted to try it during the school year. As the school year progressed, I became fascinated by the students' ability to recognize and understand words which we had studied months before. I decided to call my program the Interactive Inquiry Approach (IIA) to teaching vocabulary.

RESEARCH QUESTION

Is there a difference in medium and long-range retention of vocabulary concepts between fifth grade students who receive vocabulary instruction in a contextual dictionary approach and fifth grade students who receive vocabulary instruction in an Interactive Inquiry Approach?

SAMPLE POPULATION

Two fifth grade classes from Andrew J. Mitchell Elementary School in Boulder City, Nevada, were used for this study. Because of class turnover, only those students who were present for all three testings were examined.

Control Group

Mr. T's class consisting of 22 students: 10 girls and 12 boys.

Experimental Group

Mrs. F's class consisting of 20 students: 13 girls and 7 boys.

PROCEDURES

Vocabulary words were drawn from fifth grade curriculum areas including reading, spelling, social studies, and science. Sentences introducing the words were the same for both groups. New words were introduced each week for six weeks, most of them shortly before they were used in the respective subject areas. The pre-test and both post-tests were the same.

Control Group	Experimental Group
1. Pre-test was given September 6.	1. Pre-test was given September 6.
2. Words were introduced on 6 consecutive Mondays, each placed in context of a sentence. Fifteen words were introduced the first week, 18 the second week, and 20 for each of the last 4 weeks of the study.	2. Words were introduced on 6 consecutive Wednesdays, each placed in context of a sentence. Fifteen words were introduced the first week, 18 the second week, and 20 for each of the last 4 weeks of the study.
3. Students used dictionaries to look up the meaning of each word as it was used in the sentence, working an average of 30 minutes/week.	3. Of the twenty-word list, 7 words were discussed each Wednesday, 7 each Thursday, and 6 each Friday. Students guessed at the meanings, relying strongly on contextual clues. Students were encouraged to manipulated the words, using prefixes and suffixes. This led to the discovery of changes in parts of speech and alternate meanings. The teacher acted as a facilitator.
4. Teacher checked with the students to make sure they had chosen the meaning from the dictionary which fit the sentence and also clarified dictionary definitions. This teacher-assisted instruction took about 30 minutes/week, to make a total of approximately 60 minutes/week spent on vocabulary study.	4. Students wrote notes which were most meaningful to them: definitions, examples, personal experiences, and even drawings. Approximately 60 minutes/week were spent on vocabulary instruction.
5. A matching test was given each Friday.	5. A test was given each Tuesday consisting of a word list and 20 new sentences with blanks.
6. To measure moderate-range retention, a post-test was given November 8, 3 weeks after the last week of new vocabulary instruction.	6. To measure moderate-range retention, a post-test was given November 8, 3 weeks after the last week of new vocabulary instruction.
7. To measure long-range retention, the same post-test was given March 5, 19 weeks after the last week of new vocabulary instruction.	7. To measure long-range retention, the same post-test was given March 5, 19 weeks after the last week of new vocabulary instruction.

RESULTS

The same test was used for the pre-test and both post-tests. The test was a modified cloze form vocabulary test in which students were to choose the correct word to fill in the blank. There were 20 words and 20 sentences. Three to four words were randomly chosen from each of the six weeks of new vocabulary introduced. Pre- and post-test sentences were different from introductory sentences and the experimental group's weekly test sentences.

Table 1

Mean and Percentage of Correct Responses

		Pre-Test		1st Post-Test		2nd Post-Test	
		Mean	%	Mean	%	Mean	%
Control	Group	7.2	36	12.4	62	14.5	73
Experi-mental	Group	8.9	45	16.9	85	16.8	84

Table 2

Number of Students Receiving 100%

	Pre-Test	1st Post-Test	2nd Post-Test
Control Group	1	3	5
Experimental Group	0	9	11

CONCLUSIONS

The results of this study show that students who received vocabulary instruction through an Interactive Inquiry Approach demonstrated better medium- and long-range retention of vocabulary concepts than did students who received instruction through a contextual dictionary approach. Even though the pre-test percentage was higher for the experimental group (45% vs. 36%), the percentage of growth to the first post-test for that group was 40%, while the growth for the control group was 26%. The difference of 14% growth between the two classes is impressive. Even though the experimental group also discussed alternate meanings and various forms of each word, the students were still able to use the word as it was originally introduced. In my opinion, discussion in depth through a discovery method is a more efficient use of time, with students attaining a high rate of success.

The control group continued its improvement over the following four months to 73%, while the experimental group basically maintained its previous level of knowledge, dropping 1% to 84%. This was a surprising result which caused me to look carefully at the data and investigate more fully what happened during those four intervening months from November to March. Why did the control group continue to improve? Both classes have proceeded to teach vocabulary in the same way since the six-week study was completed. Reading skills taught were the same for both groups. The one major difference in the classes was that Mr. T. had had his students work approximately 60 minutes per week in an RFU kit (Reading for Understanding) published by Science Research Associates. The kit consists of short, open-ended paragraphs. Students choose a word or phrase to complete each paragraph. A number of the new vocabulary words are used in these paragraphs. A tentative explanation for the control group's increase in test scores is that the students had additional exposure to the words and extensive practice in completing a modified cloze form passage.

It is significant that the experimental group attained a high rate of success originally and maintained that success rate. This seems to indicate that students could continue to learn new words, plus alternate meanings and various derivatives, at a rate of at least 20 words per week, thereby greatly expanding their workable vocabulary.

HOW THIS RESEARCH HAS HELPED ME AND MY STUDENTS

I will definitely continue to teach vocabulary as a separate subject in this manner. The students seem to have a great deal of pride in their expanded knowledge and seem to be more aware of words. I feel that an interactive inquiry approach to teaching vocabulary is worthy of more in-depth research. There is a need to determine its success in student's knowledge of multiple meanings and their ability to manipulate words with prefixes and suffixes.

EXPERIMENTAL STUDY

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Will Teaching Activities for Language Knowledge (T.A.L.K.) Improve Students' Language Skills?

STATEMENT OF QUESTION

Will thirty minute "Teaching Activities for Language Knowledge" (T.A.L.K.) lessons, four days a week, improve second grade students' receptive and expressive language skills?

POPULATION

Control Group A

Mrs. X's second grade class had 20 students: 10 girls and 10 boys. Three students were in Chapter I Reading and three in Corrective Reading. One student received Special Education and ESL support. Two students were repeating second grade. There were five minority students and eleven students on free or reduced lunch.

Control Group B

Mrs. Y's second grade class had 18 students: 8 girls and 10 boys. Six students were in Chapter I Reading and three in Corrective Reading. Two students received Special Education support. No student received ESL support. No students were repeating second grade. There were five minority students and five students on free or reduced lunch.

Experimental Group

Mrs. Z's second grade class had 18 students: 9 girls and 9 boys. Three students were in Chapter I Reading and three in Corrective Reading. No student received Special Education support. One student received ESL support. No students were repeating second grade. There were two minority students and five students on free or reduced lunch.

It seemed to me these actual classrooms were equal enough to compare and the results would not be influenced by population.

PROCEDURES FOLLOWED

Control Group A	Control Group B	Experimental Group
1. HBJ basal readers were used daily with homogenous groups. Students changed classrooms for reading and may not have had reading with their classroom teacher. The reading classroom was homogenous.	1. HBJ basal readers were used daily with small homogenous groups. Students had reading with their classroom teacher. The reading classroom was heterogenous.	1. HBJ basal readers were used daily with small homogenous groups. Students had reading with their classroom teacher. The reading classroom was heterogenous.
2. Chapter I and Corrective Reading students received 45 minutes of small group reading instruction 4 days a week during classroom reading time.	2. Chapter I and Corrective Reading students received 45 minutes of additional reading instruction 4 days a week.	2. Chapter I and Corrective Reading students received 45 minutes of additional reading instruction 4 days a week.
3. Language experience activities were used as a supplement to the basal.	3. The classroom teacher consistently read to students 30 minutes a day, 5 days a week.	3. The classroom teacher read to students 15 to 45 minutes, 3 to 4 days a week.
4. "Beyond the Basal" by the Perfection Company was used as a supplement to the basal reader.	4. This group did not receive any other language activities.	4. Teaching activities for T.A.L.K. lessons were held 30 minutes a day, 4 days a week. Classes were taught 2 days a week by the classroom teacher and 2 days a week by the reading specialist. T.A.L.K. lessons covered 6 areas: a. Personal & social awareness b. Listening skills c. Rhythm & prosody d. Grammatical skills e. Word relationships f. Cognitive skills
5. The classroom teacher consistently read to students 30 minutes a day 5 days a week.		5. T.A.L.K. lessons required active verbal participation by all students.

The study lasted about seven months. I conducted the Chapter I reading lessons described in each group.

RESULTS

Pre-Post Test Data

The Peabody Picture Vocabulary Test Form L was administered to all groups in September, 1988, and April, 1989.

	Control Group A	Control Group B	Experimental Group
Number of Pre-Post Scores	**20**	**18**	**18**
Raw Score Data (Post-test)			
Improved Score	12	17*	14*
Same Score	1	0	1
Lower Score	7	1	2
Percentile Data (Post-test)			
Improved Score	6	10	9
Same Score	2	2	3
Lower Score	12	6	6

Observation Data

A daily participation record was maintained to determine changes in class involvement. Additionally, informal observations were made on some students.

1. Student A is a seven-year-old male gifted student. At the beginning of the year he seldom participated in class activities, was intolerant of others, and withdrew from the group. He has learned to be part of a team, to wait his turn to speak, and to express his thoughts more concisely.

2. Student B is an eight-year-old female ESL student. At the beginning of the year she was silent and withdrawn and reading at a beginning first grade level. She is more comfortable participating in discussions, will volunteer information, has improved her fluency and knowledge of English, and her self- confidence has improved.

3. Student C is an eight-year-old male student. He was extremely shy and wouldn't speak to the teacher for several weeks. Eventually, he was speaking up during T.A.L.K. time and would speak to the teacher. Unfortunately, he moved away in the middle of the year.

4. Student D is eight years old, male, and in an emotionally traumatic home situation. He didn't usually participate in group activities. During the year he gradually increased his participaton in T.A.L.K. lessons. By the end of the year he began talking and maintaining more consistent eye contact. Although he showed no gains on the PPVT, it is felt he made significant growth.

5. Student E is an eight-year-old female student. She is a very shy girl and rarely volunteered in class. She is now able to speak in front of a group.

The Experimental Group and Control Group B students with low or low average scores made the most gains on the PPVT. Students with high scores in all three groups made little or no gain on the PPVT. They must already have the language activities developed by the activities used in this study.

Students in the Experimental Group who showed negative gains were students whose pre-test scores the classroom teacher judged as invalid or were students under unusual environmental stresses. However, the classroom teacher observations indicated a slight gain for three of the six negative-gain students.

Half of the Experimental Group improved or maintined their PPVT percentile levels. Half of Control Group B improved or maintained their PPVT percentile levels. Less than half of Control Group A improved or maintined their PPVT percentile levels. The Experimental Group and Control Group B are from the same school and have the same Chapter I support. Control Group A is from a different school, has a different Chapter I program, and has more students on free or reduced lunch. Therefore, their lack of gain may be because of a difference in population and environment characteristics.

Even though 14 of 18 students improved their scores, according to informal observations, T.A.L.K. appears to improve areas other than those tested on the PPVT. Most significantly, social behavior and class participation improved. Next time I would use another form of assessment to measure progress in these areas too.

Control Group B made significant gains with 17 of 18 students improving their scores, apparently due to the classroom read-aloud program. Reading aloud thirty minutes every day seemed to improve receptive language.

Language development activities seem to positively influence growth in students. It is worth the time spent by teachers on these activities.

REFLECTIONS

I became convinced that language activities which require active student participation instead of language arts worksheets are more likely to improve student performance. The project not only heightened my awareness of the need for my interaction with the classroom teacher, but also the effect of my involvement in the classroom. I have concluded that initiating a new program with a team approach made the change easier for the classroom teacher. Activities which require active verbal participation and listening will be a constant component of my Chapter I reading program

We will continue using T.A.L.K. in the experimental classroom next year with all lessons being taught by the classroom teacher. We will expand the program to all primary grades in my school in the fall. In-servicing is to begin next month. Several other schools will initiate the program in the fall.

AMALGAMATION

It is fascinating to me to read of each researcher's personal gain while researching. Even though a teacher's day is full of demands that inhibit any meditative perceiving, these reports provide testimony for the renewal found in making the time. A partial list of gains I found in the research is:

1. Results usually confirm a teacher's feelings and intuitions. This validates the claim that teaching is learned by teaching. Effective teaching probably results from introspective teaching as described in the studies.

2. Results generally confirm what was presented in graduate classes or read about in professional journals. Connections are made between an idea in theory, or actions of another and a researcher's personal behavior.

3. There are always a few surprises along the way: the student who learned more than you expected, the humorous comments, the unexpected changes required (a student moved away or a fellow teacher changed a step in the design).

4. Researching provides satisfaction. Maybe all the mental activity reunites researchers with cognitive skills they were successful with during their own development as scholars. Maybe the mental activity required is why they thought they wanted to be teachers in the first place. Imbedded in most reports is a curiosity and delight I found encouraging.

5. Reports reflect an increase in personal and professional confidence. The teachers focused their efforts and documented results. How rewarding it is to pause and take credit for teaching.

6. Students always show growth as a result of our teaching. The studies all indicate students end a study with new behaviors even in the control group that received a less glamorous treatment. We should shout from the rooftops that teachers do make a difference.

7. Both overtly and covertly I noticed a sense of wonder and awe coming through the written reports. Research is its own reward and leads to feelings and thoughts that are renewing to follow up on.

8. Studies that measured attitudes reflect another dimension of growth in students that teachers don't often receive credit for. I think we all go into teaching because we want to pass on our enthusiasm for learning and because we care about learners. If

we measure attitudes and motivation it looks like we can assure positive growth during a study. Teachers are able to share their love of whatever they are doing and/or create an interest in learning.

Metacognition is a recently popular word to describe a thinking skill teachers are to pass on to their students. It means to think about thinking, or to consciously apply thinking strategies to a task while completing it. How much easier it will be to teach this awareness of thinking when we are actively engaged in it ourselves. The experience of "stepping back" from the frenzy of teaching and identifying our actions allows us to see "the whole" of teaching in a novel way. It seems to create an infectious enthusiasm in our demeanor with learners that gets communicated to learners. They can't help but react to our spirit as well as our directions as we conduct lessons. It is my experience that positive memories of schooling and learning are much more likely to occur at this spiritual level than solely at cognitive levels.

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